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Courses of Study

for the

High Schools

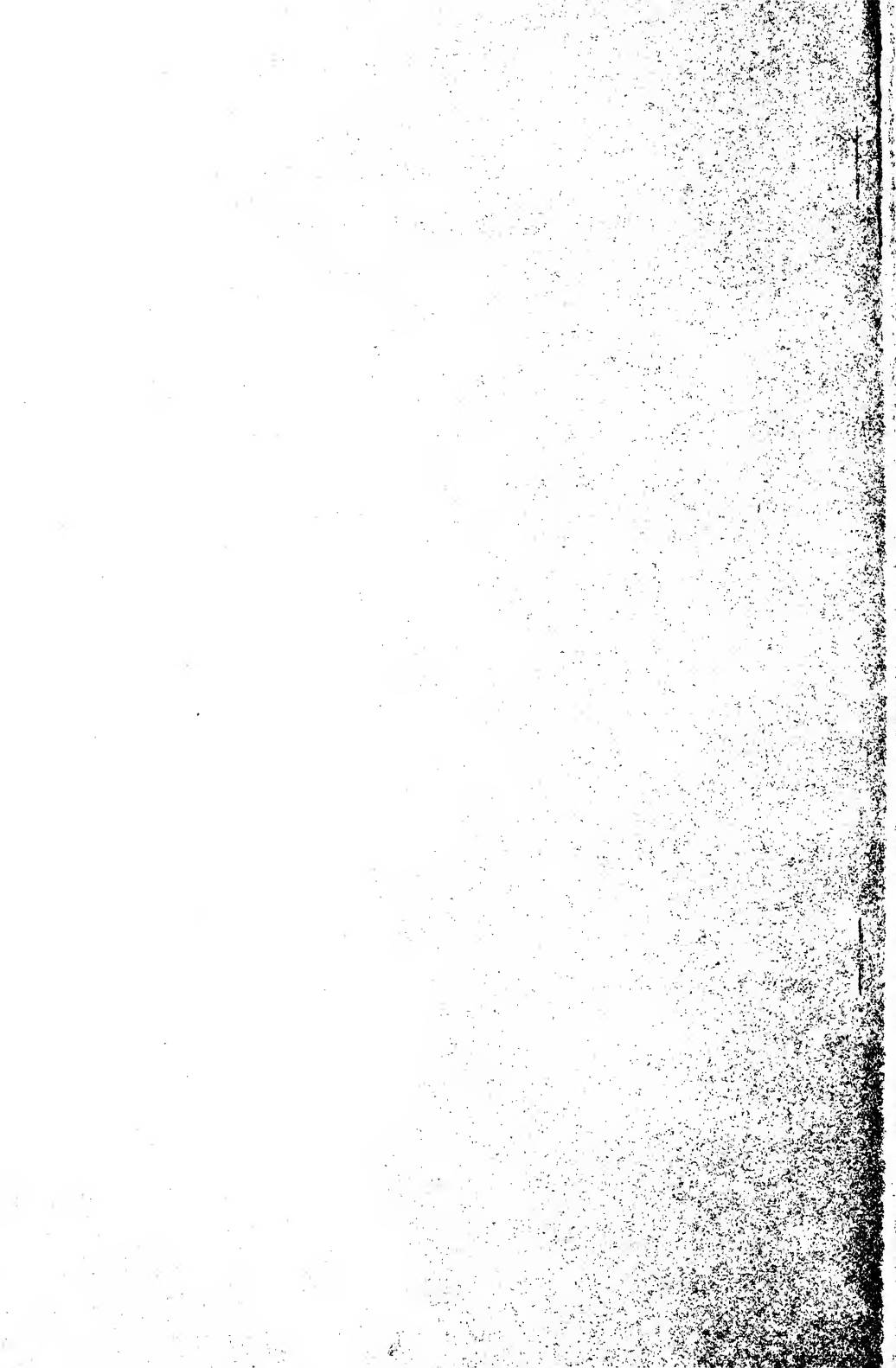
of

Oregon



State Department of Education

1915-16



STATE MANUAL
OF THE
COURSES OF STUDY

FOR THE
HIGH SCHOOLS OF OREGON
ISSUED BY THE
STATE EDUCATIONAL DEPARTMENT

J. A. CHURCHILL
Superintendent of Public Instruction
1915-16



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Department of Education

STATE OF OREGON

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Introduction

The aim of this course of study has been to make somewhat definite the different subjects offered, with a view to giving help to the inexperienced teacher. In the small rural high schools, it often becomes necessary for a teacher to give instruction in subjects for which she has made no special preparation through her college course. While the breaking up of the work into weeks, may make the manual somewhat mechanical, its purpose is suggestive, and to serve merely as a guide.

In the preparation of the manual, we wish to acknowledge indebtedness to the following: Edwin T. Reed, Oregon Agricultural College; Mrs. Jessie Goddard McKinlay, Lincoln High School, Portland; Mrs. Mabel Holmes Parsons, University of Oregon; Miss Lois E. Owen, Baker High School, Baker, and to Miss Florence R. Wagner, Ashland High School, Ashland, for the preparation of the course in English; to Mr. Barry C. Eastham, Jefferson High School, Portland, for the course in Physical Geography, Physics and Chemistry; to Miss Vera Darling, Jefferson High School, Portland, for the course in Physiology, Botany, and Biology; to Mr. James F. Elton, principal Astoria High School, for the course in Latin; to Miss Juliann A. Roller, Franklin High School, Portland, for the course in Grammar; to Miss Jessie Cox, Salem High School, Salem, for the course in History; to Mr. Merritt Davis, Salem High School, Salem, for the course in Bookkeeping; to Professor H. C. Brandon, Oregon Agricultural College, for the course in Manual Training; to Professor Ava B. Milam, Oregon Agricultural College, for the course in Domestic Science; and to Mrs. Helen B. Brooks, of the Oregon Agricultural College, for the course in Domestic Art.

To the Teachers

a. In the preparation of the High School Courses, consideration has been given for the different aptitudes of pupils and for the different preparations which a high school must give to fit all of its pupils for larger spheres of usefulness.

b. Much freedom in the choice of electives should be given with the hope that a pupil will not be forced to take a subject in which he is not interested and for which he has no aptitude; but he should not be permitted to select subjects here and there, purely for the purpose of securing credits for graduation. Competent high school teachers will wisely direct his work, and through the cooperation of the parents, the pupil and his teachers, he will pursue a course that will give him not only a symmetrical mental development, but will prepare him for some particular work, when he has completed his high school course. A pupil may change his course whenever the high school principal grants the permission, upon the written request of the pupil's parent or guardian.

c. A pupil who elects the English and Mathematics Course will take English and Algebra the first year and elect two more studies from all of the others in the first year of the various courses. Should he elect the course in English and Languages, he will take English and Latin or German, and any two of the studies of the other courses given in the first year.

d. Fifteen full credits are required for the completion of a course. Pupils should, however, if possible, complete the full course of four subjects each year, thereby earning sixteen credits.

e. While the courses are planned for four years' work, a pupil with good preparation for the work, and strong, both mentally and physically, may complete a course in three years by taking five subjects, the maximum number each year. No standard high school will permit a pupil to carry more than five subjects, and the teacher should permit none to undertake five, unless the pupil be one of more than average ability. In the best high schools of the State, not more than 5 per cent of the pupils complete a standard four-year course in three years.

f. A pupil may earn but three credits in the English and Industrial course, when majoring in any other than that course.

g. A pupil may earn from one to three credits for graduation, in either vocal or instrumental music, where the instruc-

tion is given by a teacher not connected with the school; *provided*, that the teacher must certify in writing that the pupil has spent at least eighty minutes in practice or instruction each day; *provided*, also, that the Principal of the High School shall be satisfied as to the competency of the teacher.

h. All subjects requiring no preparation on the part of the pupil, before coming to the class, such as stenography, type-writing, etc., shall be given two of the regular recitation periods.

i. A high school should offer such subjects only as its facilities and teaching force will admit. For a high school of less than sixteen pupils in attendance, when but one teacher is employed, no electives should be offered. In a high school having less than thirty pupils in attendance, where but two teachers are employed, very few electives should be offered. For all such schools, see the suggested course for small high schools on page 8.

j. On entering high school, pupils should be given full information as to the entrance requirements of colleges and universities, that those who desire to enter college after their high school graduation, may shape their high school course accordingly.

k. During the past year this department undertook the standardization of the high schools of the State. The response with which our requirements for standardization have been met by school boards, has been most gratifying. Thousands of dollars worth of apparatus have been purchased, and thousands of reference books have been placed in the libraries of the rural and village high schools. It becomes the duty of every high school teacher to show her appreciation, by so using the added equipment, that every pupil will receive the fullest benefit from it.

 OUTLINE OF COURSES OF STUDY FOR

MAJORS	FIRST YEAR		SECOND YEAR	
English and Mathematics	English Algebra	English Algebra	English Algebra	English Geometry
English and Languages	English Latin or German	English Latin or German	English Latin or German	English Latin or German
English and History	English Ancient History (Greek)	English Ancient History (Roman)	English Medieval History	English Medieval History
English and Science	English Physical Geography	English Physical Geography	English Physiology or Biology	English Botany or Biology
English and Industry	English and one of the following: Sewing, Cooking, Agriculture, Shop Work, Mechanical Drawing, Freehand Drawing, (Business Correspondence, Penmanship, Spelling), Typewriting Shorthand, Commercial Arithmetic, Bookkeeping, Music	English and one of the following: Sewing, Cooking, Agriculture, Shop Work, Mechanical Drawing, Freehand Drawing, (Business Correspondence, Penmanship, Spelling), Typewriting Shorthand, Commercial Arithmetic, Bookkeeping, Music	English and one of the following: Sewing, Cooking, Agriculture, Shop Work, Mechanical Drawing, Freehand Drawing, (Business Correspondence, Penmanship, Spelling), Typewriting Shorthand, Commercial Arithmetic, Bookkeeping, Music	English and one of the following: Sewing, Cooking, Agriculture, Shop Work, Mechanical Drawing, Freehand Drawing, (Business Correspondence, Penmanship, Spelling), Typewriting Shorthand, Commercial Arithmetic, Bookkeeping, Music

THE HIGH SCHOOLS OF OREGON

THIRD YEAR		FOURTH YEAR	
English Geometry	English Geometry	Higher Algebra American History and Civics	Higher Algebra American History and Civics
English Latin or German	English Latin or German	English American History and Civics Latin or German	English American History and Civics Latin or German
English English History	English English History	English American History and Civics	English American History and Civics
English Physics	English Physics	English American History and Civics Chemistry	English American History and Civics Chemistry
English and one of the fol- lowing: Sew- ing, Cooking, Agriculture, Shop Work, Mechanical Drawing, Freehand Drawing, (Business Correspond- ence, Penman- ship, Spelling), Typewriting, Shorthand, Commercial Arithmetic, Bookkeeping, Music	English and one of the fol- lowing: Sew- ing, Cooking, Agriculture, Shop Work, Mechanical Drawing, Freehand Drawing, (Business Correspond- ence, Penman- ship, Spelling), Typewriting, Shorthand, Commercial Arithmetic, Bookkeeping, Music	English and one of the fol- lowing: Sew- ing, Cooking, Agriculture, Shop Work, Mechanical Drawing, Freehand Drawing, Elementary Teachers' Training Course, Typewriting, Shorthand, Commercial Arithmetic, Bookkeeping, Teachers' Training, Music	English and one of the fol- lowing: Sew- ing, Cooking, Agriculture, Shop Work, Mechanical Drawing, Freehand Drawing, Elementary Teachers' Training Course, Typewriting, Shorthand, Commercial Arithmetic, Bookkeeping, Teachers' Training, Music

SUGGESTED COURSE FOR SMALL HIGH SCHOOLS

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
English Algebra Physical Geography Ancient History	English Algebra and Geometry Physiology and Botany Medieval History	English Geometry Physics English History	English Elementary Teachers' Training Course Bookkeeping American History and Civics

The suggested course for small high schools is such an one as may be offered by a standard high school having an average daily attendance of less than sixteen pupils. In such a school, one teacher may do all the work, being permitted, however, to teach not more than ten classes each day. The following plan for grouping and alternating is suggested:

The four years of English may be offered through three classes, by combining and alternating the third and fourth years.

Three years of mathematics may be taught through two classes in algebra and one in geometry the first half of the year, and through one class in algebra and two in geometry the second half of the year.

The elementary teachers' training course as outlined on page 9, may be offered through one class.

Three years of science and one of bookkeeping may be offered through two classes, the first year alternating with the second, and the third with the fourth. Under such a grouping, two courses only in science and bookkeeping are offered each year; but on the completion of his course, a pupil has had three years of science and one of bookkeeping.

The four years of history may be offered through one class in history each year. The first year, all pupils may take American history and civics, the second year, English history, the third year, Medieval history, and the fourth year, Ancient history. There is little articulation in the subject of history, and the chief objection to the plan is, that the minds of first-year pupils are not so mature as those of the fourth year, and that they can not, therefore, make the same kind of preparation for the recitation. A large gain, however, comes to such a school by offering a maximum number of subjects through a minimum number of classes. For small high schools, with two teachers, a modification of this plan is recommended, wherever it is necessary to reduce the number of classes to the teacher, to the maximum of eight.

Elementary Teachers' Training Course

This course is prepared in compliance with Sections 28 and 31, Oregon School Laws, 1915. In an Oregon high school, it is offered in the fourth year only, and its completion permits a high school graduate to receive a certificate to teach, after he has passed an examination in the subjects required for a one-year certificate. This course should not be confused with the *Teachers' Training Course* as outlined on pages 10 to 14. The Elementary Teachers' Training Course is to be offered by all high schools in the State, in order that those schools that do not maintain *Teachers' Training Courses* may meet the requirement of Section 31 of the Oregon School Laws, 1915. The *Teachers' Training Course*, which is to meet the requirements of Section 14, Oregon School Laws, 1915, should be offered by those high schools, only, that have the facilities for giving the teaching practice, as outlined in that course.

In each county, the county superintendent will examine the Elementary Teachers' Training Courses, and pass upon the character of the work done. He will certify, in writing, to the Superintendent of Public Instruction, the names of all persons who have completed the course according to the following outline:

OUTLINE FOR ELEMENTARY TEACHERS' TRAINING COURSE

1. A Textbook on the Teaching of Arithmetic, Stamper. Seven weeks.
2. Reading in Public Schools, Briggs and Coffman. Seven weeks.
3. Method and Methods in the Teaching of English, Goldwasser. Seven weeks.
4. Everyday Pedagogy, With Special Application to the Rural School, Lincoln. Seven weeks.
5. Agricultural Education for Teachers, Bricker. Seven weeks.

Teachers' Training Course for High Schools

The course is prepared in compliance with Sections 14 and 44, School Laws of Oregon, 1915. The arrangement is only suggestive, but the full amount of work given in this course must be completed by a student before he will be entitled to a certificate without examination.

The principal of the high school shall notify this department by December 1 of the number taking the course, so the blanks required by law may be furnished the school.

The schools offering this course will be visited during the year by the Superintendent of Public Instruction or an Assistant Superintendent.

A pupil in the high school may pursue any course offered until the fourth year, but to receive a certificate from The Teacher's Training Course he must complete all of the work outlined in that course for the fourth year.

I. ENGLISH

Four years of English are recommended and three are required.

II. METHODS

a. Twelve weeks devoted to a study of a Brief Course on the Teaching Process of Strayer.

b. Four weeks to Oregon School Law should be devoted to duties of superintendents, teachers and school officers, together with requirements for certification and such other laws as teachers in rural schools should know. (Special laws, procedure in bonding, etc., need not be studied.)

c. Two weeks given in study of school blanks, register, daily program and monthly report.

d. Report to the satisfaction of the principal on at least one of the texts in History of Education, and one in Principles of Education, found in the School Reference Library.

III. REVIEW

a. Nine weeks' review in Kimball's English Grammar with special emphasis on that part of the text that will supplement the work as outlined for Seventh and Eighth grades.

b. Nine weeks' review in the Complete Arithmetic with special emphasis on the topics assigned for Fifth to Eighth grades inclusive.

IV. AMERICAN HISTORY AND CIVICS

HIGH SCHOOL ADOPTIONS

Five recitations per week throughout the year, including Methods of Teaching History. See State Course of Study on History. Require the stories offered in the first four grades to be told.

V. OBSERVATION AND TEACHING PRACTICE

One year of observation and teaching practice is required, fifteen weeks of which for forty minutes each day shall be teaching practice. It is recommended that observation and teaching practice be combined in each assignment, the latter following the former.

The assignment of the pupils to the different grades for teaching practice should always be definite; that is, a pupil should know the particular work to be done, and just how to do it, before going to the grade to get the teaching practice. There should be at least eight such assignments. Substitute work, where the teacher is ill, or absent from the room, should not be considered "teaching practice," for the work is not supervised. The regular teacher should be in the room throughout the assignment period, that she may serve as critic teacher for that period. The Teachers' Training Course is at best a makeshift until Oregon can have sufficient normal schools to train its teachers for the elementary schools. In the meantime, the course should be made just as strong as each high school can make it, and wherever possible, a normal school graduate, or one who has had much experience in the grades, should direct it.

The following eight suggested assignments should prove helpful to those who, after graduation, begin their teaching in the rural schools:

SUGGESTED ASSIGNMENTS

1. Primary reading, first grade. Three weeks.
2. Primary numbers, first grade. Two weeks.
3. Language lesson, second and third grades. Two weeks.
4. A writing lesson, any grade. One week.
5. Geography, South America. Two weeks.
6. Multiplications, third grade. One week.
7. Reading, fifth grade. Two weeks.
8. Language, sixth grade. Two weeks.

At the close of each assignment, the pupil is required to file a written report of not less than 300 words with the high school principal. These reports are to be filed for the inspection of the Superintendent of Public Instruction or the assistant superintendent on his annual visit.

No high school should attempt the Teachers' Training Course unless there be a sufficient number of teachers in the grades connected with it, who are willing to cooperate in giving the members of the class an opportunity to get the observation and teaching practice required.

CERTIFICATION

Principals offering this course will please read carefully Sections 14 and 44, School Laws of Oregon, 1915, noting especially the following provisions:

A one-year State certificate shall be granted without examination to applicants who have completed four years' work in an accredited high school or other accredited institution; *provided*, that the applicant shall have completed the Teachers' Training Course in such high school or institution as provided for in this act. A one-year State certificate may be renewed only once when the holder thereof has presented satisfactory evidence of having successfully taught six months' school during the life of such certificate. (Section 14, Subd. 2.)

Schools offering this course shall have a reference library of at least three volumes on each of the following fields of professional study: History of Education, Principles of Education, Methods and Special Training in Industrial Education, including agriculture. (Section 44, Subd. 5.)

BOOKS RECOMMENDED FOR REFERENCE LIBRARY

History of Education—

- Parker, S. C. History of modern elementary education.
- Monroe, Paul. Brief course in history of education, 1905.
- Thwing, C. F. History of education in the United States since the Civil War.
- Graves, F. P. History of education of modern times.

Principles of Education—

- Klapper, Paul. Principles of educational practice.
- Dewey, John. The school and society; supplemented by a statement of the University elementary school, 1900.
- Scott, C. A. Social education.
- Ruediger, W. C. Principles of education, 1900.
- Pestalozzi, J. H., Leonard and Gertrude; translated and abridged by Eva Channing, 1907.

Industrial Education, Including Agriculture—Country Schools—

- Coulter, J. M., and others. Practical nature study and elementary agriculture, 1909.
Hodge, C. F. Nature study and life, 1902.
Carney, Mabel. Country life and the country school.
Row, R. K. Educational meaning of the manual arts and industries.

Educational Psychology—

- Colvin, S. S. The learning process.
Bagley, W. C. The educative process, 1905.
James, William. Talks to teachers on psychology and to students on some of life's ideals, 1900.
Dewey, John. How we think, 1910.
Rowe, S. H. Habit formation and the science of teaching, 1909.

Teaching—

- Strayer, S. D. A brief course in the teaching process.
Betts, G. H. The recitation, 1911.
Charter, W. W. Teaching the common branches.
Bagley, W. C. Class management; its principles and technique, 1907.
O'Shea, M. V. Everyday problems in teaching.

FREE BULLETINS

The following are all Farmers' Bulletins and may be obtained by addressing the Division of Publication, Washington, D. C. One copy should be obtained for each student in the Department:

- No. 34. Meats: Composition and cooking.
No. 42. Facts about Milk.
No. 63. Care of Milk on the Farm.
No. 85. Fish as Food.
No. 93. Sugar as Food.
No. 121. Beans, Peas, and other Legumes as Food.
No. 128. Eggs and Their Uses as Food.
No. 131. Household Tests for the Detection of Oleomargarine and Renovated Butter.
No. 142. The Nutritive and Economic Value of Food.
No. 155. How Insects Affect Health in Rural Districts.
No. 166. Cheese Making on the Farm.
No. 175. Home Manufacture and Use of Unfermented Grape Juice.
No. 182. Poultry as Food.
No. 183. Meat on the Farm; Butchering, Curing and Keeping.
No. 188. Weeds Used in Medicine.
No. 203. Canned Fruit, Preserves and Jellies.
No. 234. The Guinea Fowl and Its Use as Food.
No. 241. Butter Making on the Farm.
No. 249. Cereal Breakfast Foods.
No. 256. Preparation of Vegetables for the Table.
No. 270. Modern Conveniences for the Farm Home.
No. 291. Evaporation of Apples.
No. 293. Uses of Fruit as Food.
No. 295. Potatoes and Other Root Crops as Food.
No. 298. Food Value of Corn and Corn Products.
No. 332. Nuts and Their Uses as Food.
No. 345. Some Common Disinfectants.

- No. 359. Canning Vegetables in the Home.
No. 363. The Use of Milk as Food.
No. 375. Care of Food in the Home.
No. 377. Harmfulness of Headache Mixtures.
No. 389. Bread and Bread-making.
No. 391. Economical Use of Meat in the Home.
No. 393. Habit Forming Agents: Their Indiscriminate Sale and Use a
Menace to the Public Welfare.
No. 413. The Care of Milk and Its Use in the Home.
No. 521. Canning of Tomatoes.

REFERENCE BOOKS FOR SCHOOL LIBRARY

- Conn—"Bacteria Yeast and Molds."
Norton—"Food and Dietetics." American Home Economics Series.
Kinney & Cooley—"Foods and Household Management."
Forrester & Wiegley—"Foods and Sanitation."
Campbell—"A Textbook in Domestic Science."
Conn & Buddington—"Advanced Physiology and Hygiene."
Conley—"Nutrition and Diet."
Elliott—"Household Hygiene."
Richard—"Cost of Living."
Richard—"Air, Water and Food."

References for Teacher—

- Gerhard—"Sanitation of Country Homes."
Sherman—"Food Products."
Sherman—"Chemistry of Food and Nutrition."
Talbot—"House Sanitation."

Course of Study in English

This syllabus of the High School Course in English includes, (a) a statement of principles and suggested directions for teaching literature in the high school, together with an outline of study based on the State texts, Abernethy's "American Literature" and Long's "English Literature"; (b) a statement of principles and suggested directions for training in written and oral speech, together with an outline of study based on Brook's "English Composition"; (c) a brief statement covering the conduct of oral English; and (d) a brief section devoted to methods of cooperation among teachers of English.

The syllabus is based on a weekly program of three recitation periods, of 45 minutes each, for literature, one of which is to be devoted largely to oral or written reports of outside reading; and two recitation periods for composition.

The syllabus divides the work into two terms for each year; but the year may be taken as the unit by simply combining the work of the two terms for any year.

A COURSE IN LITERATURE FOR HIGH SCHOOLS

The scheme of this syllabus, in general, has been to assign American literature to the first and second years, and English literature to the third and fourth years of the high school course, distributing the literary history as well as the literature throughout the eight terms. The reasons for this are obvious. American literature is less difficult for students to master than English literature; since it is not only less voluminous, but also, in general, simpler both in theme and style. Students are already somewhat familiar with it, moreover, through their earlier studies, and find in it a fresh appeal to their sense of patriotism which has been developed in the grammar grades. The literature, both for study and reading, correlates as far as possible, with the literary history. If English literature were taken up first, this arrangement might offer serious trouble, due to the difficulty of reading the early English writers. It becomes quite feasible, however, when English literature is reserved for the last two years of the course. American literature, which did not begin until well up into the Shakespearean age, presents no such problems in the study of its early writers as does English literature, with its Caedmon, Layamon, Chaucer, and even Malory. The chronological arrangement followed in the syllabus is not only natural in itself but easy for young minds to grasp.

The syllabus is based on certain general principles. Among these are the following: A course in literature for high school

students should aim at quality rather than quantity, both as to subject matter read and the manner of reading it; and should consider the student's actual and potential power of appreciation, his present interests, and his future development. There is grave danger of expecting high school students to read as rapidly, as understandingly, and as appreciatively as men and women in middle life. There is also grave danger of making the course injudiciously balanced, giving equal attention to the classic and the modern type of literature, to poetry and prose. As a matter of fact, a certain lack of balance is judicious; for example, more poetry than prose, particularly fiction, in a course; because there is no need to stress that which the students are likely to read without a teacher. Fiction almost every child is bound to read, yet he needs to read even some fiction with the teacher in order to arrive at an appreciation of good fiction. Poetry, good or bad, he is not so likely to read. It is important, therefore, that the teacher present poetry in the most alluring manner possible, and present it often. It is equally important to present the more difficult and permanent pieces of literature, the classics, in preference to the easy and modern selections, which the pupil is more likely to read anyway.

A course of study, then, should contain both prose and poetry, with as many types of each as examples suitable for high school pupils, will permit. The selections, for the most part, should be those having a high degree of literary merit so that they may set a standard of taste. They should carry the right ethical and social message so as to contribute to the building of character. They should give sufficient latitude of choice, in any term, to make it unnecessary for a teacher to attempt to interest pupils in a classic in which he himself has no interest. They might well include something in periodical literature. They should be arranged for the four years according to some central idea; that is, there should be such a constructive plan back of the assignments that the students, at the conclusion of the course, shall have appropriated a certain portion of the field of literature. Finally, a course for the State should be so flexible that teachers, in conference with the State Superintendent of Public Instruction, may modify that course to suit local conditions.

Both in American and English literature, students should be assigned special readings from the writers whose chief works are not read in class. Such work may be reported to the class orally from an outline; and may well occupy one of the three literature periods of each week, thus serving the double purpose of training in literature and composition.

Memorizing, both in poetry and prose, should be emphasized throughout the four years of English training. The emotional and spiritual message of a noble selection of verse or prose can never be so vividly appreciated as in the process of memorizing that selection for oral presentation to others, especially if the process itself is oral. Such memorizing not only adds new and dynamic words to the student's vocabulary and gives him fresh cadences for phrase- and sentence-making, but it also gives him standards of judgment with which to measure the merits of other poetry and prose.

FIRST YEAR

(Numbers following the classics refer to the State Library List.)

FIRST TERM

I. *American Literature.* Abernethy, Chapters I and II, pages 1 to 106.

II. *Classics.*

1. For reading: Autobiography of Franklin (1299-3047).
2. For reading: The Courtship of Miles Standish, Longfellow (2306), or
The New England Tragedies, Longfellow (2305), or
Selections from Poems of American Patriotism (820).
 - a. Boston—Emerson.
 - b. Paul Revere's Ride—Longfellow.
 - c. Battle of Lexington—Lanier.
 - d. Concord Hymn—Emerson.
 - e. Ticonderoga—Wilson.
 - f. Grandmother's Story of Bunker Hill Battle—Holmes.
 - g. Warren's Address—Pierpont.
 - h. The Old Continentals—McMaster.
 - i. Nathan Hale—Finch.
 - j. The Little Black-eyed Rebel—Carleton.
 - k. Song of Marion's Men—Bryant.
 - l. The Star-Spangled Banner—Key.

(The above selections with the exception of "The Star Spangled Banner," are illustrative of the Revolutionary and Colonial periods of history.)

3. For study: Farewell Address. Washington (2564-2566). Published with Webster's First Bunker Hill Monument Oration.

Topical reports on other prose and poetical selections suggested in Abernethy.

SECOND TERM

I. *American Literature.* Abernethy, Chapters III and IV, pages 107-207.

II. *Classics.*

1. For reading: The House of Seven Gables. Hawthorne (2439), or

The following group:

- a. The Sketch Book (2534) or The Alhambra, Irving (2532).

1. The Spectre Bridegroom.

2. Westminster Abbey.

3. Palace of the Alhambra.

4. The Moor's Legacy.

- b. Essay on Compensation, Emerson (2528).

- c. Twice Told Tales, Hawthorne (2443).

1. Edward Randolph's Portrait.

2. The Great Carbuncle.

2. For reading: Translation of the Iliad, Bryant (2673).
Read Books I, VI, XXII, XXIV, and others if time permits.

Topical reports on other authors as suggested in Abernethy.

SECOND YEAR

THIRD TERM

I. *American Literature.* Abernethy, Chapters V, VI, VII, pages 208-347.

II. *Classics.*

1. For study: The First Bunker Hill Monument Oration, Webster (2566). Published with Washington's Farewell Address, or

Selections from the Writings and Addresses of Abraham Lincoln (2538).

a. First Inaugural Address.

b. Second Inaugural Address.

c. Address in Independence Hall.

d. Speech at Gettysburg.

e. Last Public Address.

f. Letter to Horace Greeley.

g. Address at Cooper Institute.

h. Final Proclamation of Emancipation.

2. For study: The Vision of Sir Launfal, Lowell (816).

3. For reading: The Gold Bug *and* The Raven, Poe (2312).

Topical reports on other authors as suggested in Abernethy.

FOURTH TERM

I. *American Literature.* Abernethy, Chapters VIII, IX, X, pages 348-487.

II. *Classics.*

1. For reading: The Oregon Trail, Parkman (3013), or one of the following biographies or autobiographies:
 - a. Life of Alice Freeman Palmer, G. H. Palmer (1708).
 - b. The Story of My Life, Keller (1306).
 - c. The Making of an American, Riis (1325).
 - d. The Promised Land, Antin (1278).
 - e. Up From Slavery, Washington (1322).
2. For reading: Selected Poems from Riley (in volume of "Old Fashioned Roses.")
 - a. Old Fashioned Roses.
 - b. An Old Sweetheart of Mine.
 - c. The Little White Hearse.
 - d. The Lost Kiss.
 - e. A Life Lesson.
 - f. Little Orphant Annie.
 - g. Silence.
 - h. To the Cricket.
 - i. Knee-deep in June.
 - j. The Clover.
 - k. When the Frost Is on the Punkin.
 - l. The Clover.
3. For reading: Selected Poems of Eugene Field (804). A Little Book of Western Verse.
 - a. Little Boy Blue.
 - b. Lullaby By the Sea.
 - c. Cornish Lullaby.
 - d. Japanese Lullaby.
 - e. Christmas Hymn.
 - f. Dutch Lullaby.
 - g. Mother and Child.
 - h. Krinken.
 - i. In the Firelight.
 - j. The Bibliomaniac's Prayer.
 - k. Some Time.
4. For reading: Selected Poems of Whitman.
 - a. O Captain, My Captain.
 - b. When Lilacs Last in the Door-Yard Bloomed.
 - c. Out of the Cradle Endlessly Rocking.

5. For reading: Birds and Bees, Burroughs (456).
6. For reading: The Piper, Peabody (2357).
7. American Periodicals.

(The committee suggests that unless the school library is liberally supplied with periodicals the teachers have the students form a periodical club, so that ten or twelve of the best magazines may be taken among the students and exchanged. This list ought to be broad as to subject matter; that is, it should include one or two magazines or papers of general interest and others of special or technical interest.)

General Interest:

- Literary Digest.
- The Independent.
- The Outlook.
- Current Opinion.
- Oregon Teachers Monthly.

Fiction and Essays:

- Atlantic Monthly.
- Harper's.
- Century.
- Scribner's.

Building and Decorations:

- Arts and Crafts.

Book Reviews:

- The Bookman.

Art:

- Art and Progress.

Business:

- System.

Manual Arts:

- Manual Training Magazine.

Social Service:

- The Survey.

Agriculture:

- Pacific Northwest.
- Hoard's Dairyman.
- Western Stock Journal.
- Breeder's Gazette.
- Better Fruit.
- Northwest Poultry Journal.

The reading this term should be not so intensive as extensive. There should be much oral reporting upon special topics, using the list of readings given in Abernethy.

THIRD YEAR

FIFTH TERM

- I. *English Literature*. Long, Chapters I, II, III, IV, V, VI, through Shakespeare, pages 1-155.
- II. *Classics*.
 1. For reading: Beowulf and the Finnesburgh Fragment (2287).
 2. For study: The Prologue to the Canterbury Tales (2295), or The Knight's Tale, Chaucer (2295).
 3. For reading: Early English Ballads (2349).
 - a. Sir Patrick Spens.
 - b. Robin Hood.
 - c. Chevy Chase.

4. For study: Julius Caesar (2361-63, 2366) or Merchant of Venice (2361-3, 2370).
5. For reading: As You Like It, or Twelfth Night (2361-63, 2373).

Topical reports on readings from other authors studied about in Long.

SIXTH TERM

- I. *English Literature*. Long, Chapter VI, beginning with Shakespeare, VII, VIII, pages 156-257. Review pages 1-155.
- II. *Classics*.
 1. For study: Macbeth (2361-63, 2369).
 2. For reading: Bacon's Essays (2514).
 - a. Of Studies.
 - b. Of Friendship.
 3. For study: L'Allegro, Il Penseroso, Comus, Milton (2310).
 4. For reading: The Pilgrim's Progress, Part I, Bunyan (2396).

Topical reports on readings from other authors studied about in Long.

FOURTH YEAR

SEVENTH TERM

- I. *English Literature*. Long, Chapter IX, pages 257-368. Review pages 1-257.
- II. *Classics*.
 1. For study: Speech on Conciliation with America, Burke (2516), or
For reading: Robinson Crusoe, Defoe (2410), or
For reading: The Vicar of Wakefield, and The Deserted Village, Goldsmith (2435-2300), or
For study: The Sir Roger de Coverley Papers, Addison and Steele (2512).
 2. For study: Burns' Poems, and Carlyle's Essay on Burns (2518).
 3. For reading: Elegy Written in a Country Churchyard, Gray.

Topical reports on readings from other authors studied about in Long.

EIGHTH TERM

I. *English Literature*. Long, Chapters X and XI, pages 369-568. Review pages 1-369.

II. *Classics*.

1. Wordsworth (2328).
 - a. For reading: *The Daffodils*.
 - b. For study: *Tintern Abbey*.
 - c. For study: *Ode to Duty*.
 - d. *Ode on Intimations of Immortality*.
2. Coleridge (2298).
 - a. For reading: *The Ancient Mariner*.
3. Scott.
 - a. For reading: *Marmion* (2317), or *Ivanhoe* (992).
4. Byron (2293).
 - a. For reading: *The Prisoner of Chillon* (2293).
5. Shelley.
 - a. For reading: *The Skylark and The Cloud* (2318).
6. Keats.
 - a. For reading: *Ode on a Grecian Urn and To a Nightingale* (2303).
7. DeQuincey.
 - a. For reading: *Joan of Arc* (2525).
8. Tennyson.
 - a. For reading:
The Idylls of the King (2324), or *A Group of Lyrics* (2324).
- a. *The Coming of Arthur*.
 - a. *Ulysses*.
- b. *Gareth and Lynette*.
 - b. *The Lady of Shalott*.
- c. *The Passing of Arthur*.
 - c. *Oenone*.
 - d. *Songs from the Princess*.
 - e. *Break, Break, Break*.
 - f. *Ode on the Death of the Duke of Wellington*.
 - g. *Selections from In Memoriam*.
 - h. *Crossing the Bar*.
9. Browning, Robert (2289).
 - a. For reading:
 1. *Cavalier Tunes*.
 2. *How They Brought the Good News From Ghent to Aix*.
 3. *The Pied Piper of Hamelin*.
 4. *Home Thoughts From Abroad*.
 5. *Home Thoughts From the Sea*.

6. Songs From Pippa Passes.
7. My Star.
8. Evelyn Hope.
9. The Lost Leader.
10. Incident of the French Camp.
11. Herve Riel.
12. Pheidippides.
13. The Last Duchess.
- b. For study:
 1. Rabbi Ben Ezra.
 2. Saul.
10. Eliot. (a) For reading: Silas Marner (2429), or Dickens. (a) For reading: A Tale of Two Cities (2423), or Stevenson. (a) For reading: Treasure Island.
11. Thackeray. (a) For reading: English Humorists (2558).
 - a. Swift.
 - b. Addison.
 - c. Steele, or Huxley. (a) For reading: Autobiography and Selections (2531), or Macaulay. (a) For reading: Essay on Milton (2543).

Much supplementary reading should be done out of class and reported upon by pupils, so that the other prominent writers mentioned in Long are well fixed in the students' minds.

A COURSE IN COMPOSITION FOR HIGH SCHOOLS

The course in English composition is based on the assumption that the duty of the public high school is to teach English as a habit, a craft, rather than English as a fine art. The aim of the training in composition, therefore, should be to give students an adequate command of the mother tongue in speaking and writing. The training should result, in the first place, in dynamic thinking—in an elevated and spiritualized view of life. It should result, in the second place, in an increased power of organization—the ability to collect, arrange and shape material to a definite human purpose. It should result, finally, in a more careful regard for excellence of workmanship—for obedience to the principles of style, and for discrimination in sentence structure, choice of words, and the mechanics of punctuation and spelling.

Since it is only by constant, well-directed practice that skill in any craft is acquired, it follows that the essential thing in composition training is the making of themes, oral or written.

Oral themes, which should constitute half the work, may be employed successfully to cultivate ready and independent thinking, as well as fluent and correct habits of speech. Written themes, which are better adapted to an exact and constructive criticism, are means of securing more searching effects and more elevated impressions, together with a finer finish.

That the life of the school may be more intimately related to the responsibilities and activities of business and professional life, the composition work should take occasional excursions into the vocations—farming, salesmanship, the law courts, the hospital and clinic, the brick yard, the logging camp, the salmon fishery, the cannery, the condensery, and the machine shop. In this way interest is quickened and a sort of vocational guidance is arrived at.

At least half the composition assignments should be based on themes related to the life of the students, rather than on themes directly related to literature. Too many schools are still paralyzing their English work by failing to look for theme subjects beyond the stereotyped realm of the classic and the textbook. Books, both within the school and without, may well furnish inspiration and serve as models for the composition activities, at all times; but their use as actual theme subjects, except for occasional reports both oral and written, and for informal class discussion, is of little avail in shaping the language habits of students.

As far as possible, every theme should have a motive; it should be written for a human purpose, not merely for credit. "All of us adults do our best work in the world," says President Eliot, "under the impulse of a life-career motive." We do something for a purpose. In the same way, students in school who are encouraged to write some specific thing for some specific purpose, quite within their powers, will do that work well. "How We Built a Giant-Stride at A—— School," "A Report of the Class Election" (for the local paper), "The Construction and Operation of My Wireless," "Why We Need a Better (or larger) Playground," "My Visit to the Tile Factory," "My Work in the Corn-Growing Contest," "Using the Babcock Tester," "Why I Chose (this or that institution) for Advanced Study"—these are subjects that for the right student at the opportune time offer the sort of incentive that makes school work vital. Letters written to real people for real purposes are always a constructive kind of composition. Reports and comments on athletic activities or on school or class events, composed for the school notes or for the local paper, are also dynamic efforts.

The assignment of the subject for the weekly or semi-weekly theme should be given careful attention. In general, the subject should not be either an absolutely exact assignment by the teacher, or an absolutely free choice by the student. Occasionally either method is successful. But as a rule, in order to carry out a definite plan throughout the term, as well as to provide a basis of comparison between the work of different students, it is better to assign a class topic under which the students may make their individual choices. The assignment, for instance, may be to write an informal exposition on "My Choice of a Life Work," with suggestive readings from Stevenson's "A College Magazine," Franklin's Autobiography, and Puffer's "Vocational Guidance." Each student, while confining his theme to the assigned subject, gives it an individual interpretation. Again, the assignment may be a descriptive sketch under the class topic "A Barnyard Scene," with suggestive readings by the teacher of such vivid paragraphs as are found in "The Legend of Sleepy Hollow" (the Van Tassel barnyard), in "The Stout Gentleman" (the barnyard on a rainy day), in "Evangeline" (a tranquil evening scene), or in "The House of Seven Gables" (the Pyncheon hens), or in some of George Eliot's realistic descriptions of English farm yards. Each student, catching his cue from some one of the readings, recalls the scene most vividly held in imagination, and recounts an original experience or fancy. Other topics, equally suggestive for individual treatment, are "A Book That Has Influenced Me," "An Exemplary Townsman," "A Christmas Episode," (Readings from Dickens, Irving, Mary E. Wilkin's "The Christmas Monks," Frances Hodgson Burnett, etc.), "A Local Industry," "Memories of an Aged Relative" (Reading of "Grandfather" in Roy Rolfe Gilson's "In the Morning Glow"). The object of this sort of assignment is to stimulate interest and momentum in the less resourceful student, and yet not trammel the initiative of the more imaginative worker.

FIRST YEAR

(a) Strive for a few definite results. (b) Balance the oral and written composition. Emphasize both. (c) Hold conference hours with students. (d) Keep the English work in contact with the life of the student. (e) While enlisting present interests, lead to higher interests.

FIRST TERM—Brooks I, 1 to 93.

In the first term, composition centers about narration, though all forms of discourse are informally used.

Make free use of the blackboard in criticising themes before the class.

Cultivate habits of neatness, accuracy and promptness in theme work.

I. Oral and Written Expression of Ideas.

1. Similarities.
2. Difference between oral and written expression of ideas.
3. Two essentials of expression:
 - a. Know what to say.
 - b. Say it clearly.
4. Expression and observation.
5. Self-criticism—makes for growth.
6. Oral reading of themes.
7. Narration.
8. Elements of interest in narrative.
9. The real and the imaginary in narration.

II. The Paragraph as the Unit of Composition.

1. Definition of a paragraph.
2. Topic statement.
3. Preparation for the recitation.
4. The outline an aid to unity in recitation.
5. Mechanics of the paragraph.
6. Preparation for writing a paragraph.
7. Principles of composition in the paragraph.
 - a. Unity.
 - b. Coherence.
 - c. Emphasis.
8. Methods of developing a paragraph.
 - a. Details.
 - x. In time.
 - y. In space.
 - b. Specific instances.
 - c. Comparison and contrast.
 - d. Cause and effect.
 - e. Repetition.
 - f. Combinations of these.
9. Topical recitations.

III. Whole Composition.

1. Principles.
 - a. Unity, demands that a composition shall group itself about one central idea.
 - b. Coherence, demands that a composition shall be so organized that the relation of its parts are clear and logical.
 - c. Emphasis, demands that the important parts of a composition shall have important treatment.
2. An outline assists in securing unity, coherence, and emphasis.

3. Choice of subject and title.
4. Methods of developing a composition.
 - a. Sequence in time.
 - b. Position in space.
 - c. Comparison and contrast.
 - d. Specific instances.
 - e. Cause and effect.
5. Transitional and summarizing paragraphs.

SECOND TERM—Brooks I, 93 to 159.

In second term English continue narration, giving more attention to details of sentence structure, use of words, punctuation, etc. Use letter writing frequently. Insist on the correction of themes criticised by the teacher, requiring the original theme to be returned with the revised or rewritten copy. Make all criticisms constructive, encouraging a regard for organization and form. Keep up the habit of review, by recurring again and again to principles already studied.

IV. *Sentences.*

1. Kinds of sentences.
 - a. Loose.
 - b. Periodic.
 - c. Balanced.
2. Principles governing the sentence.
 - a. Unity.
 - b. Coherence.
 - c. Emphasis.

Observance of these principles will produce the qualities of clearness and force.

3. Lack of Unity caused by:
 - a. More than one main thought.
 - b. Addition of too many independent clauses.
 - c. Incongruous ideas.
 - d. Needless change of construction.
 - e. Too short a sentence.
4. Lack of Coherence is caused by:
 - a. Careless placing of modifiers.
 - b. Misuse of pronouns.
 - c. Misuse of participle.
 - d. Misuse of connectives.
 - e. Needless change of construction.
5. Emphasis is secured by:
 - a. Placing important words in conspicuous positions.
 - b. Use of climax.
 - c. Use of balanced sentences.
 - d. Use of periodic sentences, etc.

V. *Corrections.*

Material in Chapter V of Brooks' English Composition, Book I, should be used chiefly for reference in correcting errors in the oral and written themes of students. In order that the rules for capitalization, punctuation, spelling, and syntax, together with the proper use of *shall* and *will* may be automatically obeyed, however, and good usage thus habitually acquired, the exercises should be carefully worked out in the regular lessons as directed.

VI. *Choice of Words.*

1. Oral and Written vocabulary.
2. Increasing the vocabulary.
3. General and specific words—specific generally better.
4. Words should be chosen that are (a) correct, (b) exact, (c) appropriate, (d) forcible.
5. Correct words obey good usage; *i. e.*, they are:
 - a. National.
 - b. Present.
 - c. Reputable.
6. Exact words fit the meaning.
7. Words may be appropriate to (a) the subject, (b) the occasion, (c) the understanding of the listener or reader.
8. Forcible words are usually simple, specific, suggestive, figurative.

VII. *Figures of Speech.*

Use this chapter in connection with the study of some figurative poem or oratorical prose, identifying various figures in the literary selection by reference to the examples in Brooks.

SECOND YEAR

In connection with the exercises in description and exposition, send the pupils to the magazines and journals for examples. This will break the way for the more careful study of periodicals in the third year. In connection with letter writing, assign actual letters to actual people. Require some of the work, at least, in the usual form for posting—envelope and all. Encourage good taste in selection of stationery, addressing of envelope, etc. Discourage all affectation.

THIRD TERM—Brooks I, 160 to 195.

Description: Summary.

1. Description is that form of discourse which has for its purpose the creation of an image.

2. Each description should have:
 - a. A fundamental image.
 1. The fundamental image must remain unchanged.
 2. A comparison helps in the formation of a proper fundamental image.
 - b. A point of view.
 1. Only those details should be given which can be seen from the point of view.
 2. The point of view may change.
 - c. A few characteristic details.
 - d. A proper selection of minor details.
 - e. A suitable arrangement of details.
3. Each description should possess:
 - a. Unity, as determined by the point of view.
 - b. Coherence, as determined by the arrangement of details in the proper space-order.
 - c. Emphasis, as determined by position, proportion of parts, and the selection of words.

Letter Writing:

1. Importance of Form.

The forms in letter writing are the result of usage.
We must obey these if we would escape the criticism of eccentricity or bad taste.
2. Features of letters and letter writing that are subject to formal rules which must be understood and practiced are the following:
 - a. Paper.
 - b. Parts of a letter such as, heading, address, salutation, body, complimentary close, signature, envelope.
3. Business letters are subject to particular directions, such as:
 - a. They should be clear.
 - b. They should be brief.
 - c. They should be devoted (preferably) to a single subject.
 - d. They should be answered promptly.
 - e. They should be correct.
 - f. They should be obedient to good usage.
 - g. They should be neatly executed.
4. Friendly letters, while obedient to the principles of composition and the formalities of usage, should be individual and entertaining.

5. Formal notes and replies should follow exactly the prescribed forms and should carry a complete, unmistakable message.
6. Informal notes, which are not much restricted as to form, should be simple, personal, and confined to one subject.

Exposition: Summary.

1. Exposition is that form of discourse which has for its purpose explanation.
2. Exposition may be of any length—words, sentences, paragraphs, whole compositions, volumes.
3. Expositions may use:
 - a. Words (synonyms or simpler words).
 - b. Sentences.
 - c. Paragraphs.
4. Understanding may be aided by:
 - a. Studying synonyms.
 - b. Avoiding incomplete and inaccurate thoughts.
 - c. Studying homonyms and words often confused.
5. Exposition must be clear. Therefore it must possess unity and coherence.
6. An outline aids in securing unity and coherence.
7. Exposition sometimes takes the form of generalized narration.
8. Expository paragraphs may be written by the use of:
 - a. Details.
 - b. Examples.
 - c. Comparison or contrast.
 - d. Cause and effect.
 - e. A combination of methods.

FOURTH TERM—Brooks I, 216 to 285.

Argument: Summary.

1. Argument is that form of discourse which has for its purpose the proving of the truth or the falsity of a proposition.
2. Assertion is not argument.
3. The essential characteristics of argument are:
 - a. Unity.
 - b. Coherence.
 - c. Emphasis.
4. The first step in argument is explanation.
5. Description and narration may also be used in argument.
6. A long argument requires a summary.

7. The plan of an argument should usually include:
 - a. Introduction.
 - b. Proof.
 - c. Conclusion.
8. The brief is very important in argument.
9. An argument may be developed:
 - a. By stating advantages and disadvantages.
 - b. By using specific instances.
 - c. By stating cause and effect.
 - d. By a combination of methods.
10. Debate.
 - a. Oral debating is a valuable exercise.
 - b. A debate should not be memorized.
 - c. The proper forms of address should be used.
 - d. The subject of the debate may be stated in the form of a resolution, a declarative sentence, or a question.
 - e. Belief is not necessary in debate.
 - f. The most important arguments should be given the first and last positions.
 - g. The refutation of opposing arguments may usually be best done just preceding our own last and strongest argument.
 - h. Cautions in debating.
 1. Be fair.
 2. Be honest with yourself.
 3. Do not allow your desire for victory to overcome your desire for truth.
 4. Remember that mere statement is not argument.
 5. Remember that exhortation is not argument.

Review of Grammar.

THIRD YEAR

The course in Composition does not attempt to dispose of any one form of discourse or any one principle of composition or quality of style at a single lick. Rather, the subject is attacked again and again, until the habit of right usage is established. The treatment of any topic is cumulative, however, leading from simple to complex, and from elementary to advanced forms. In the four terms of the first two years, practically the whole field of composition has been carried on in an elementary and constructive fashion, giving the student who progresses thus far a working acquaintance with the elements of good usage and the principles of style.

In the two terms of the third year of the course, the student is given a more thorough and scientific training in this process of individual expression, in the art of letter writing, and in the three forms of discourse—narration, description and exposition. Oral composition is regularly emphasized and the newspaper and periodical are studied in class, both for the purpose of recognizing and practicing the various forms of expression, such as the editorial, the news report, the book review, and the short story, and for the purpose of establishing standards of judging the value of a periodical.

FIFTH TERM

Brooks' English Composition, Book II, pages 9-131. (No outline summaries are given for third and fourth year as they would generally repeat much already summarized in first and second year.)

SIXTH TERM

Brooks II, pages 132-198.

FOURTH YEAR

In the fourth year of the high school course the cumulative process of dealing with composition is especially exemplified in the study of Argumentation. This form of discourse is now quite intensively treated, with numerous exercises in the drawing of briefs, and in the presentation of proof, including a discussion of the nature of evidence, and the effective characteristics of persuasion. Debate is naturally an important feature of this year's work. The organization and composition of the long theme, involving library research and the gathering of material, is a feature of this year's work.

A brief study of the drama, the novel, the short story, the essay, and the oration are taken up in connection with the reading of these various types of discourse in the course in literature. Attention is now directed to style and to the individuality of the various writers. Poetry is studied from the standpoint of form, and occasional verse and stanza exercises are practiced, not so much for the purpose of developing verse-makers as for the purpose of encouraging an appreciation of poetry.

Review of Grammar, punctuation, etc. (incident to theme construction).

SEVENTH TERM

Brooks II, 199-273.

EIGHTH TERM

Brooks II, 274-396.

Oral English

The object of oral expression in the schools is to cultivate a correct, flexible, and dynamic speech which shall be adequate to all ordinary occasions of human intercourse. The term oral expression, as here employed, includes dramatic interpretations or acting, interpretative readings, declamations, orations, speeches, and debates, together with original oral composition. The object of acting, interpretative readings, and declamations is generally slightly different from that of original speechmaking, debating, and oral composition. One group is chiefly concerned with mastering, and conveying vocally, the thoughts and emotions of another; the other is chiefly concerned with cultivating the power to think before an audience and to carry the stream of thought to that audience.

Throughout the four years of the high school course regular practice in reading aloud before the class should be demanded of every student. This work should be conducted in an alert, stimulating fashion, with the obligation always imposed upon the reader of actually getting hold of his audience.

Following out, in all recitations, the first direction under "Cooperation in English Training" will produce a general improvement. So will the use of dramatization in the study of Shakespeare or Goldsmith, in the study of dramatic poetry, or dramatic passages of fiction.

A literary society, either voluntary or required, is a constructive factor in promoting good English, provided its programs are made the main interest of the meetings.

An occasional school play, intelligently selected, and conscientiously coached, may also afford excellent training in the art of expression.

Oral composition, however, is the most efficient and ready means of cultivating correct and dynamic speech. With most students accomplishment in oral expression is almost a prerequisite of fluent and effective writing. This seems to be a repetition of the principle of the elementary school which requires that a theme shall be composed orally before it is attempted in writing.

In all exercises in oral composition certain simple rules should be kept in mind. (a) The work must be sustained from week to week to bring results. (b) All exercises should involve an outline plan, however simple. (c) The compositions should be thought out completely beforehand, but not memorized. (d) Students should appear before the class, and should be taught to command the situation, not simply by holding attention, but by arriving at results. (e) A natural, erect, and purposeful bearing should be a constant aim.

SUGGESTED OUTLINE IN ORAL ENGLISH

(Not a required element in the Course in English, but a suggested course of exercises that will greatly reinforce all the work of the English department.)

FIRST YEAR

FIRST TERM

Practice in enunciation, articulation, and pronunciation.

Training in proper placing of the voice.

If possible, some attention should be given to physical exercises of the throat and to proper breathing.

Exercises in simple pantomime for concentration of the mind and freedom of the body.

SECOND TERM

Continue exercises of the first term. Supplement with others, developing management of the voice, projection of tone, breath control, etc.

Practice in oral reading, assigned or at sight, such passages as give colloquial expressions or dialect, or are significant for beauty of thought.

Practice in reading poetry in order to get the rhythm without singsong effect. In all reading the speaker, by bearing, voice, and manner should hold the attention of the audience.

SECOND YEAR

THIRD TERM

Continue exercises in reading, both prose and poetry. Pupils should learn to *feel* the music of poetry, rhythm and meter, and to read it with naturalness and ease. Good musical passages are found in Lowell's "The Vision of Sir Launfal," Coleridge's "The Rime of the Ancient Mariner," Poe's "The Raven," and "Annabel Lee," Shelley's "The Skylark," and Tennyson's "The Lotus Eaters."

Practice in the delivering of memorized selections.

Practice in interpretation of character and impersonation of a single character.

FOURTH TERM

Begin work in informal speaking, narrating of personal experiences, How to make and How to do. (This could sometimes be supplemented by pantomime.)

Practice in organizing meetings and carrying on business. Study and practice in parliamentary law. (This would fit in well with work in civics and history.)

THIRD YEAR

FIFTH TERM

Continue and develop work in public speaking.

Practice in informal speeches, toasts, and impromptu speeches, if they can be managed with success and profit.

Advance to more formal speeches, political, popular; lectures and debates on public questions, or those of local or school interest.

The test of success here is interest of the audience. The speaker must be interested in his subject and have his material well in hand, and speak in a free, easy, lively manner.

(This work offers splendid opportunity for developing constructive criticism in the pupils.)

SIXTH TERM

Continue and develop debate and public speaking. Carefully prepared outlines should be required of all students whether they speak or not.

Continue and develop dramatic interpretation. Practice writing in dramatic form and reproducing scenes from literature—good passages for this can be found in George Eliot's "Silas Marner," Dickens' "A Tale of Two Cities," some of Stevenson's novels, and Chaucer's "Prologue."

Interpretation and presentation of dramatic poems. Good examples for individual work are found in Tennyson's "Locksley Hall" poems, and in Browning's simpler dramatic monologues. Of course, Shakespeare offers numberless selections. (If these are too difficult, the teacher can easily find simpler ones that possess dramatic qualities.)

COOPERATION IN ENGLISH TRAINING

Teachers can cooperate in securing better English, both oral and written, on the part of all students by following such directions as these:

1. Insist on:

- a. Topical recitations.
- b. Complete answers to questions.
- c. Logical arrangement of ideas.
- d. Distinct enunciation of words.

2. Combine assignments in English and other subjects for special research and report. A report on "The Commercial Uses of Sand" or "The Chemistry of Bread Making" may well serve the purpose of study in both the Science and English classes.

3. Arrange occasionally to have the papers of English students, written for other classes, reviewed by the English teacher.

4. Let all teachers grade papers for English, either by giving them a separate mark for the workmanship of expression, or by combining this with the grade for subject matter.

5. Compile lists of misspelled words and misconstructions, most frequent of occurrence, for drill in English classes.

6. Set an example of alert but kindly effort to neutralize the bad effects of the street and the illiterate home by practicing a more nearly perfect language art.

7. Realize that teachers of English have the most vital, human, and abundant subject in the school curriculum; that the English language is the greatest in the world, having outstripped in growth and power all other European languages; that English literature is the most beautiful and inspiring of world literatures; and that all who speak this language and read this literature should do so with love and pride.

FOURTH YEAR

SEVENTH TERM

Continue advanced work in debate and public speaking. Pupils should be able to select and organize material. All work should be given before the class without more than the briefest notes and without having formally committed the speeches.

EIGHTH TERM

Practice in writing simple dramatic scenes, or a complete drama with proper action, staging, etc.

Good exercise could be found in the production of a drama by pantomime. The test of success here should be not so much action as clearness of plot.

Production of plays, as often as the judgment of the teacher or rules of the school permit, would be helpful.

In cities large enough to offer the opportunity, the pupils might derive much benefit from visiting the theatre and reporting on such plays as are suggested by the teacher.

Mathematics

ALGEBRA

GENERAL SUGGESTIONS

a. All definitions should be explained by the teacher, formally memorized by the pupil and frequently applied.

b. In all of the abstract work, drill is the essential feature. Much blackboard and seat work during the recitation period will secure accuracy and rapidity. The exercises in the adopted text should be supplemented by a large number from other texts. "Skill comes by doing," is nowhere more applicable than in acquiring facility in the abstract operations in the fundamentals of algebra.

c. Before assigning work, introduced for the first time, the teacher should give sufficient insight into the operations to permit the pupil to approach the preparation of the lesson with some degree of confidence.

d. The progress of many pupils in the solution of thought-problems is slow and difficult. Yet progress is always possible if the pupil is first taught to express himself in the language of algebra, and the problems are based on familiar ideas. Getting into the swing of the reasoning process may come slowly, but it will come surely if the teacher patiently illustrates, where the ideas are obscure.

The following apportionment of the text by weeks, is suggestive only, as the previous preparation of the pupils, and their aptitude for the subject, must modify the distribution of the time:

1. Pages 1 to 34.
- 2-3. Pages 34 to 54.
- 4-9. Pages 54 to 96.
- 10-11. Pages 96 to 111.
- 12-18. Pages 111 to 154.

At the end of the eighteenth week, a pupil should be able to recognize at sight, the different types of factoring, and have a secure grasp of their forms and methods. Without such technical skill, progress in the subject must be difficult.

19. Pages 154 to 160.
- 20-24. Pages 160 to 185.
- 25-29. Pages 185 to 206.
- 30-31. Pages 206 to 221.
- 32-36. Pages 221 to 244.
- 37-44. Pages 244 to 280.
- 45-47. Pages 280 to 297.

48-54. Pages 297 to 250 and pages 281 to 386.

(Omit pages 297 to 303, inclusive.)

With the average class, the remaining portions of the text should not be attempted unless another half year be devoted to it.

GEOMETRY

GENERAL SUGGESTIONS

a. Definitions should be explained by the teacher, memorized by the pupil, and applied as they are needed.

b. Require from the pupil, always, a complete proof, to prevent the serious error of permitting him to feel contented with loose and slipshod reasoning, which prevents the main purpose of the instruction in geometry.

c. Ample opportunity for cultivating the originality, and exercising the ingenuity of the pupil, are found throughout the text. Time may not permit the working out of all the exercises; but from one-third to one-half of the whole number should be solved. The teacher should change the selections from year to year.

d. To prevent the pupils memorizing the proofs, require all figures to be numbered differently from those on the text.

e. For the first month, not more than one or two propositions should be assigned in advance, with several always in review. As a pupil finds himself in the subject, he will work understandingly and confidently.

First half-year, Brooks I and II.

Second half-year, Brooks III, IV and V.

Third half-year, Brooks VI and VII.

Science

The physical sciences teach us to understand how Nature works in producing her various changes not involving life. After learning the rules of Nature's operation, the next step is often to adapt them to our own uses. Science, rightly studied, is not a burden to the memory, but an answer to the perpetual "Why?" of youth—an aid to the understanding.

Effort should be made to get from the pupil simple, direct statements with few qualifications and no useless or ambiguous words. This training in exact statement tends to form definite and lasting conceptions of the processes studied.

The sciences of physics and chemistry, and, to a less extent, physical geography, have been developed by intelligently questioning Nature through experiments. The performance by the pupil of some of these experiments, illustrating fundamental processes, is nowadays considered essential to impress the facts involved on his mind, and to make them a part of his experience. The pupil should arrange the apparatus, control the experiment, draw his own conclusions and make a permanent record of his work in a notebook. A record of field-trips should be kept in the same notebook.

Many good lecture-room experiments are included in the text and the instructor should perform as many of them before the class as time and equipment will permit. However, things done by the pupil himself are better remembered than those seen; but things either seen or done make more lasting impressions than those read about.

The following schedules have been arranged with the idea that two of the five weekly recitation periods will be devoted to laboratory work.

Occasional field trips should be taken in each of the sciences, investigating the natural features of the neighborhood in physical geography; and power plants, gas works, factories, filter plants, etc., in chemistry and physics. If these trips occasionally take the form of class picnics, so much the better.

The schedules for physical geography, physics and chemistry require sixteen weeks each term. The remaining two weeks may be devoted to review, and the laboratory work can profitably be suspended during this period. The fine print in the texts, except the lecture-room experiments and descriptions of devices depending on principles studied, may be omitted until review and then taken up as far as time permits.

The teacher will get much assistance on the pedagogic side by reading on this subject in Smith and Hall's *Teaching of Chemistry and Physics*, Mann's *Teaching of Physics*, and John-

son's *High School Education* (a chapter on each of the three sciences). *School Science and Mathematics*, a monthly magazine, also contains much valuable material for the teacher.

PHYSICAL GEOGRAPHY

The study of man's larger home, the earth, will interest any normal pupil when the details are never allowed to become detached from his experience or understanding. The familiar should always be an island of knowledge whose shores are constantly extended by study and illustration.

A tendency of pupils to learn without believing—at least without visualizing—should be guarded against. The most should be made of local physiographic features, mineral deposits, etc., not alone for their own sake, but also because they are probably typical and give very definite impressions when the points of interest are properly emphasized.

As a general reference book, Salisbury's *Physiography* is excellent. *The National Geographic Magazine*, a popular monthly magazine describing countries and peoples in well-written and illustrated articles, will be a valuable addition to the school library. Most of the other books referred to are on the list compiled for high schools by the Oregon State Library. Of these Thomas Condon's *Oregon Geology* is indispensable and should be used freely to make local the general discussions of the text. A great deal of material on the Pacific Coast states will also be found in Fairbank's *Practical Physiography*.

FIRST TERM

- (1-34) The earth's relation to the solar system, and its motions. Two weeks.

See M. E. Martin's *The Ways of the Planets*.

- (35-39) Map drawing. One week.

See Mill's *International Geography*.

The topographic maps of the U. S. Geological Survey, covering the local district, and others from time to time, should be secured and mounted on cardboard.

- (40-99) Ground water and rivers. Four weeks.

See Salisbury's *Physiography*.

- (100-137) Lakes. Three weeks.

See T. C. Russell's *Lakes of North America*; also Diller's *Geological History of Crater Lake* (U. S. Geological Survey).

- (138-168) Glaciers. Two weeks.
Seek evidence of glaciers in your neighborhood.
See Condon's *Oregon Geology*; also T. C. Russell's
Glaciers of North America.
- (169-196) The ocean. Two weeks.
See Sir John Murray's *The Ocean*.
- (197-234) Shore lines. Two weeks.
See Salisbury's *Physiography*. Emphasize the
effect of harbors on the development of a
district.

SECOND TERM

- (235-273) The land. Three weeks.
A rock and mineral cabinet should be freely used to
familiarize the pupil with the more common
forms.
Emphasize the identification of local types.
See W. O. Crosby's *Common Minerals and Rocks*;
also *The Mineral Resources of Oregon*, published
by The Oregon Bureau of Mines and Geology.
- (274-308) Physiographic agencies. Two weeks.
See E. J. Houston's *Wonder Book of Volcanoes and
Earthquakes*.
- (309-347) Physiographic features. Three weeks.
See "Relief Features" in Salisbury's *Physiography*.
- (348-399) The atmosphere. Four weeks.
See E. J. Houston's *Wonder Book of the Atmos-
phere*.
The daily weather maps from the U. S. Weather
Bureau should be subscribed for and studied in
this connection. They are free.
- (408-448) Geography of plants, animals, and man. Three
weeks.
See Tarr's *Economic Geology of the United States*.
- (449-476) Physiographic regions of the United States. One
week.
Review. Two weeks.

PHYSIOLOGY AND HYGIENE

GENERAL INSTRUCTIONS

I. Personal and public hygiene are of the most importance in this course. Anatomy cannot be taught in the high school.

II. Get the pupils to observe their own habits; to try simple experiments to test theories; and to take a personal interest in health problems of the home and the community.

REFERENCE BOOKS

Martin—Human Body.

Bryce—The Laws of Life and Health.

Pyle—Manual of Personal Hygiene.

Sadler—Science of Living.

Sadler—Cause and Cure of Colds.

LeBosquet—Personal Hygiene.

Gulick—Hygiene Series.

Elliott—Household Hygiene.

Delano—The American Red Cross Textbook on Elementary Hygiene and Home Care of the Sick.

OUTLINE OF COURSE IN PHYSIOLOGY AND HYGIENE

FIRST SIX WEEKS

I. *General Structure of Body Cells, Tissues and Organs.* Chapter I.

II. *Digestive System.* Chapters V, VI, VII.

a. Organs, glands, secretions, and their work. Have the pupils make out a table showing the complete process of digestion of the various food stuffs.

b. Hygiene of digestion. Emphasize (1) the selection of proper foods; (2) the necessary amount of foods and the effects of over-eating; (3) proper mastication; (4) the effect of posture on digestion; (5) use of water and the amount necessary; (6) care of the teeth; (7) prevention of the diseases of the digestive tract.

III. *Absorption, Circulation and Assimilation of Food Elements.* Chapters VIII to XI.

a. Process of absorption; structure of the blood, blood vessels, and heart; flow of the blood over the body; exchange of the elements in the process of assimilation in the cells.

b. Hygiene of the circulatory system. Emphasize the habits that affect the condition of the blood, blood pressure and heart action; the exercises that help to regulate circulation; the care of wounds.

SECOND SIX WEEKS

IV. *Respiration*. Chapters XII, XIII.

a. Structure of the respiratory organs and the voice box; the mechanism and chemistry of respiration.

b. Hygiene of respiration. Emphasize (1) the proper method of breathing; (2) the benefits of good posture, deep breathing, loose clothing, exercise, the out-door life; (3) ventilation of buildings; (4) prevention of diseases of the respiratory organs.

V. *Excretion*. Chapters XIV, XV.

a. Structure of the excretory organs, and the skin; process of excretion and the uses of the skin.

b. Hygiene of excretion. Emphasize (1) the proper kinds and amounts of foods; (2) drinking of sufficient water; (3) care of the skin, hair, nails; (4) effects of cold, warm, and hot water baths; (5) proper clothing; (6) prevention of diseases of the skin and the excretory organs.

VI. *Nervous System*. Chapters XVIII, XIX, XX.

a. Structure of the brain, spinal cord and the nerves; the processes of nerve impulse and reflex action.

b. Hygiene of the nervous system. Emphasize the processes of habit forming, brain development and control; the effect of stimulants; the relation of the nervous system to all the other systems of the body; the effect of good posture, exercise and right living; causes of insanity, paralysis, nervous prostration, etc.; necessary every-day habits for the right development of the nervous system, and the prevention of the nervous diseases.

THIRD SIX WEEKS

VII. *Skeletal System*. Chapter XVI.

a. Structure of the bones, joints, ligaments and cartilage. The location of the principal bones.

b. Hygiene of the skeletal system. Emphasize the care of injuries to joints and bones; the effect of shoes upon the foot; effect of corsets upon the developing bones of the young girl; the necessity for correct posture.

VIII. *Muscular System*. Chapter XVII.

a. Structure and use of muscles; the location of the most important muscles; the relation of the nervous system to the muscular; etc.

b. Hygiene of the muscles. Emphasize the need of exercise and the different kinds of exercise for the different sets of muscles; the effects of good and bad posture, etc.; the prevention of diseases of the muscles.

IX. *Special Sense Organs.* Chapters XXI, XXII.

a. Eye. Take up briefly the structure of the eye and the formation of images but emphasize strongly the care of the eyes, especially of children; the kind, location, and the amount of light; the proper lighting of the home and all public buildings; the danger of neglect of the eyes; the effect of imperfect eyes upon general health.

b. Ear. Structure of the ear and the perception of sound. Emphasize the effect of colds, sore throat, etc., upon the ear; the danger of the neglect of the ear, of the young especially; and the general care of the ear.

X. *Public Health.*

Emphasize the relation of personal habits to public welfare; the work of the public health department; sanitation of the home, and the city; care of foods, water, ice, etc.; regulations in regard to infectious diseases, garbage, sewage, etc., proper constructing, lighting, and heating of all buildings; extermination of the house fly, the rat, etc., and all of the peculiar health problems of the community.

BOTANY

GENERAL INSTRUCTIONS

I. Because of the lack of time, omit Chapter XXVI of Bergen and Caldwell's Practical Botany; use Chapters XX-XXV, inclusive, for reference only; and omit minor details in all other chapters.

II. Instead of teaching a lot of facts about many plants, teach the principles of the functions of plants, the general characteristics of the main groups of plant forms, and the relations of plants to man.

III. Follow the suggestions concerning plant forms as given in the outline of the biology course.

REFERENCE BOOKS

- Coulter—Textbook of Botany for Secondary Schools.
Duggar—Plant Physiology.
Grout—Mosses With a Hand-lens.
Sweetser and Kent—Key and Flora to Bergen's Botany.
Andrews—Practical Course in Botany.
Sargent—Plants and Their Uses.
Frye—Northwest Flora.

Sweetser—A Popular Description of the Common Oregon Ferns.

Conn—Bacteria, Yeasts, and Molds in the Home.

Mathews—Familiar Trees and Their Leaves.

Sudworth—Forest Trees of the Pacific Slope.

Georgia—Manual of Weeds.

Farmers' Bulletins, United States Department of Agriculture.

Forest Service Bulletins, United States Department of Agriculture.

OUTLINE OF THE COURSE IN BOTANY

FIRST SIX WEEKS

I. *Cell Structure.*

Introduce the course by a brief demonstration of cells. Take up the structure of protoplasm, its composition and powers.

II. *Structure and Work of the Parts of the Seed Plants.* Chapters II-IX.

a. Roots for absorption, anchorage and storage. (1) Structure of the root tip, root hairs, cross and lengthwise sections of fleshy roots. (2) Composition of the soil, fertilizers, drainage, tillage and water supply, irrigation, etc.

b. Leaves for respiration, transpiration, and photosynthesis. (1) Structure of the epidermis and stomata; cross-sections to show internal structure, chloroplasts, and veins. (2) Process of respiration, use and operation of stomata; food manufacture. (3) Leaf adaptations for work and special conditions (pages 55-71).

c. Stems for support, circulation, and as an aid to the leaves. (1) Structure of buds, epidermis, and bark. (2) Internal structure of the stems of annual and perennial dicotyledons and monocotyledons. (3) Transport of the soil water and manufactured food; adaptations for special conditions.

d. Flower for reproduction. (1) Structure and use of parts of a typical flower. (2) Pollination, fertilization and seed and fruit formation. (3) Special adaptations for self and cross pollination; insect and wind pollination. (4) Seed structure and development. (5) Seed distribution. Have the pupils make large collections, showing the adaptations for dispersal of seeds.

SECOND SIX WEEKS

III. *Economic Phases of the Study of Plants.*

a. Plants useful to man for food, clothing, lumber, medicines, dyes, ornamentation, etc.

b. Plant breeding; grafting and other means of artificial propagation; pruning; etc.

c. State and national problems connected with forestry, agriculture, and horticulture.

IV. *Classification of Plants.*

a. Bacteria. Use many practical demonstrations and have the pupils work up the various topics in written papers.

b. Algae. Oscillatoria, Spirogyra, Pleurococcus, Diatoms, Vaucheria, Chara, and Fucus are the best forms to show the development from the simple forms to the more complex, and the methods of reproduction. Have pupils collect the material used.

c. Fungi. Spend at least two weeks on this group. Emphasize the fungi of the home, as the molds; the fungi of the farm crops, as the mildews, blights, smuts, rusts, etc.; the fungi of the trees, as the lichens, pore and gill fungi, etc. Take up their life histories, preventative and curative measures.

d. Mosses. Show the various stages in the life history. A collection of mosses is profitable, if time allows.

THIRD SIX WEEKS

e. Ferns. Treat as with the mosses.

f. Gymnosperms. Structure of the flowers and cone of the Oregon fir. Teach the pupils to recognize all the gymnosperm trees of the vicinity.

g. Angiosperms. Use Sweetser's Key and Flora to acquaint the pupils with the flowering plants of the vicinity. Instead of each pupil making a herbarium, have each add a few new specimens to a school collection. Extra specimens can be exchanged with those of other schools of other localities, and so enlarge the school collection. Acquaint the pupils with the native trees and the noxious weeds.

Select typical flowers in the various families for careful analysis in the laboratory, and then have the pupils find as many others in those families as possible. Press and mount specimens of flower and leaf in the notebook beside the drawings.

BIOLOGY

GENERAL INSTRUCTIONS

I. Teach from life, and use the textbook more as a reference book.

II. The instructor must look over the entire year's work and stock the laboratory with necessary material. Use only fresh material whenever possible.

III. At the opening of school, have the pupils bring in collections of the following, credit being given for such:

1. Leaves, fruit, and wood of the common trees; flowers to be added in the spring and summer. Press the leaves and dry or preserve the fruits.

2. Common noxious weeds, their flowers and fruits.
3. Insects of all kinds. Many of the typical insects should be preserved in formaldehyde for future use.
4. Moth and spider cocoons and butterfly chrysalises.
5. Old wasps' nests and birds' nests.
6. Fern spores and prothallia. Moss capsules.
7. Large frogs, toads, earthworms, etc.
8. Destructive fungi, such as: Rose, willow, and grapevine mildews; oat and corn smut; wheat rust; apple scab; plum and peach rot; pore and gill fungi on forest and fruit trees; insect galls; etc.
9. Live cabbage worms. Keep these feeding on cabbage leaves and they will soon complete their entire metamorphosis.
10. Mushrooms and toadstools. These can be dried and moistened again when needed.

IV. At different times during the first two weeks, start corn, bean, pea, and squash seeds in damp sand or sawdust; these to be used to illustrate stages in plant development.

V. Each pupil should have a convenient blank page notebook for recording observations by large, outline drawings, well labeled; and for tables, outlines, summary notes, etc. Long detailed notes are not advisable. Use 5H or 6H drawing pencil.

VI. When a pupil shows particular interest in any phase of the work, give him a chance to do extra work along that line, giving him extra credit, of course.

VII. After the completion of any portion of the work, as outlined, give the pupils a list of questions for their review and summarizing of that portion.

VIII. Necessary laboratory equipment : (1) several hand lenses; (2) one compound microscope, at least, with $\frac{2}{3}$ and 1-6 objectives; (3) package of safety razor blades; (4) insect cage of wire gauze; (5) small sand boxes for quick germination of seeds; (6) battery or regular aquarium jars for holding water plants and animals; (7) preservation jars (Mason or Economy can be used); (8) formaldehyde for preserving specimens; (9) potassium cyanide for killing insects; (10) plant press; (11) potted plants, such as petunia, geraniums, wandering jew and hyacinth.

IX. Because of the nature of the work and the differences in equipment, it is impossible to divide the work uniformly, but the first six weeks should probably include work to "Assimilation and growth," under "Life functions"; the second six weeks to "Insects," and the third to "Vertebrates."

REFERENCE BOOKS

Doane—Insects and Disease.

Comstock—Insect Life.

Chapman—Bird-life.

Hodge—Nature Study and Life.

Jewett—The Next Generation.

Jordan, Kellogg and Heath—Animal Studies.

Reed—Western Bird Guide.

Lord—First Book Upon the Birds of Oregon and Washington.

For books on plants and man, consult the suggestive lists in the outlines for Botany and Physiology courses.

OUTLINE OF THE YEAR'S COURSE IN BIOLOGY

FIRST TERM

I. *Introduction.* Chapter I, Hunter's Essentials of Biology.

a. Scope of Biology. Emphasize the fact that man is the highest form of life and that biology is especially concerned with all life that is closely related to man and his activities.

b. Benefits of the study of life. Get the pupil to realize that his aim in life should be to attain to his greatest efficiency and to help, not hinder, his fellowmen to be efficient. A list of professions and occupations that require a knowledge of biology can be introduced here.

c. General similarities in plants, animals and man. From the pupil's own knowledge and observations, arouse his interest and curiosity in various forms of life and their activities.

d. Relation of plants and animals to man. Have pupils make a list of the ways plants and animals are of benefit to man directly or indirectly.

II. *Structure of Living Things.*

a. Cell structure (Chapter III, Text). Gross structure of cells can be easily shown by the pulp of orange; cross-section of any succulent plant; moss leaves or thin onion skin under the low power of the microscope; skin of a toad or scrapings from the inner surface of the human cheek; human blood under high power, etc. To show detail structure, showing the movement of the protoplasm, cut thin sections of a young tomato or petunia stem and examine large hairs under the high power objective of the microscope.

III. *Life Functions of Seed Plants.*

Make these very clear here, and the human functions will be understood more readily.

a. Absorption of food elements. (1) In tabular form, have pupils record the most important food elements, the source of each and the use made of each (Chapters II and VII). (2) Adaptations for absorption (Chapter VII, Text). Root

structure can be shown by corn seedlings germinated on wet blotting paper; by wandering jew slips, growing in water; by fleshy roots, as the carrot; by the tap root of any small herb. Examine the small roots of the seedling under the low power to see the root-tip, and crush it to find the fibro-vascular cells in the center.

b. Respiration and transpiration (Chapter IX, Text). (1) General explanation of these functions. (2) Adaptations (Chapter IX). Strip the epidermis from a hyacinth, begonia, or geranium leaf to show stomata. Cross-sections of leaves can be obtained by tightly rolling a firm leaf, such as the English ivy, and then shaving off thin slices. Transpiration can be shown by placing a small potted plant under a large jar, first covering entire pot and soil with rubber cloth.

c. Starch making (Chapter IX). Chloroplasts can easily be shown in the sections of the leaf suggested above. Effect of light can be shown by placing a young plant in dark for several days.

d. Circulation (Chapter VIII). (1) Substances in circulation; the direction and cause of the flow. By placing seedlings and young shoots of any succulent plant in red ink or a saffranin solution for a few hours and then cutting cross and lengthwise sections, the course of circulation can be demonstrated. (2) Adaptations. The structure and arrangement of the fibro-vascular bundles can be best shown by thin sections of young corn stems and old squash stems.

e. Assimilation and growth. The process of oxidation and transforming of food elements into cell substances, to cause cell growth, should be emphasized and made very clear here. The process of the division of cells, causing the increase in tissues, can be best shown by permanent mounts of root tips which can be obtained from a scientific supply house.

f. Reproduction (Chapters IV, V, VI). (1) Formation of the seed in the flower. Use the largest, simplest flowers for demonstration. (2) Seed structure. Use soaked corn, bean, pea, and squash seeds. (3) Seed dispersal. Use material collected by the pupils at the beginning of school, and any fresh material available. (4) Seed development. Seedlings, previously germinated in sand boxes, should be now ready to show the various stages of development. Detail structures should be passed over rapidly but the principles of reproduction, embryonic protection, and transmission of parental characteristics should be strongly emphasized.

IV. *Forms of Life.*

a. Outline of the classification of plants (Page 157, Text).

b. Outline of the classification of animals. The classification given by Dr. Jordon, and others, in "Animal Studies," may

be used, if simplified. These outlines, of course, are not to be committed to memory, but are merely an aid to systematizing the work.

V. *Study of the Microscopic Water Plants and Animals.* Chapters XI, XV.

Have the students bring in jars of stagnant water with the water scums, and other small water plants and animals; also any green stain on old fences, wet stones, etc. By this time in the fall, many should be forming spores. The following points should be emphasized: (1) General structural characteristics and comparison of the various forms. (2) Habitat, and food requirements. (3) The rapid asexual reproduction and the beginning of the more complex sexual reproduction, and the need of such method. (4) Those forms of special economic importance.

VI. *Study of the Sea Forms of Life.*

Every school in a sea-coast state should have a good collection of preserved sea weeds, starfish, shells, etc.

a. Sea algae. Acquaint the pupils with such forms as *Ulva*, *Alaria*, *Laminaria*, *Nereocystis*, *Postelsia*, and *Fucus*. The reproduction of *Fucus* is easily shown by cross-sections of the swollen tips.

b. Sponges, corals, etc. Examine bits of the commercial sponge under the microscope. Use the fresh water hydra to show structure of the coral polyp.

c. Mollusca. Use any fresh water forms of clams, slugs, snails, etc., if no sea forms are available.

d. Starfish. Use specimens preserved in formalin, and not the boiled and dried ones. Structural developments should be shown by careful dissection.

e. Sea crustacea. Use fresh water crawfish, and compare with the sea forms.

With all these forms, take up the gross structure, the adaptations for the life functions, the increase in complexity of tissues and organs, the food and life habits, and the economic importance of each group.

VII. *Study of Insects.* Chapters XIX, XX.

There should be sufficient preserved material for each student to observe for himself the structural characteristics of the main orders of insects. Points to be emphasized are: (1) Life histories of the typical insects of the main orders. (2) Life functions and the adaptations for those functions. (3) Economic importance of the different insects; protection of the forest and fruit trees, farm crops and ornamental plants; the destruction of the disease-causing insects, such as the house fly, mosquitoes, etc.

Considerable time should be spent upon this study. Have the pupils do as much reference work as possible, writing papers and making tables. The work upon the insects cannot be completed until spring, but observation charts can be started at this time, to be completed later.

VIII. *Spiders and Their Allies.*

Only a comparison of structural features is necessary, but the economic importance should be made clear.

IX. *Worms.* Chapter XVII.

Emphasize the peculiar adaptations, life habits and the economic importance. Specimens of various kinds of common worms should be in the laboratory.

X. *Fungi.* Chapters XI, XIII.

a. Bacteria and yeasts. Have the pupils bring from home examples of the work of bacteria in decay and beneficial fermentation. Require papers on such topics as, "The protection of the home against bacteria," "The protection of the city against disease bacteria and other germs," "The process of pasteurization." Demonstrate the work of the root tubercles of the clover.

b. Molds. Put damp slices of old bread into a warm dark place, about two weeks before molds are needed. Keep old spores over for next year and mold can be grown in a few days. Have pupils bring specimens of fruit, leaf, and other molds. Emphasize the preventative measures.

c. Fungi destructive to useful plants. Acquaint pupils with the common mildews, blights, smuts, rusts, rots, etc. Their time and method of attack; their growth, reproduction, and distribution should be made very plain, and the preventative and curative measures emphasized.

d. Fungi destructive to trees. Because of our great lumber industry, these fungi should be strongly emphasized. Acquaint the pupils with such forms as the pore and gill fungi and the means of cure and prevention.

e. Other common fungi. The lichens, puffballs, mushrooms, etc., should be briefly studied, with some microscopic examination.

f. Mosses, ferns, horsetails, etc. The life histories of these may be taken up here, if there is sufficient material in the laboratory for demonstration; but, preferably, leave, until fresh material can be obtained.

SECOND TERM

I. *Vertebrates.* Chapter XXII.

A careful dissection of a large frog and a fish should be done by the instructor or, preferably, by the pupils. No anatomical details are necessary, but the structural adaptations

for the life functions should be made clear. The circulation can easily be shown by exposing the heart in a fleshy, chloroformed frog and by examining the thin skin between the toes.

In the study of the different groups, emphasize the following:

a. Structural adaptations for obtaining food and air, for protection, and for any peculiar life habits.

b. Habitat and peculiar modes of living.

c. Development of the sense organs.

d. Reproduction. The stages in the development of the salmon may be obtained from the State fish hatcheries. The eggs of the frog can be made to mature in the laboratory by feeding the tadpoles with water from some quiet pond. Keep a little duckweed in water, also. Secure the use of a sitting hen and show the daily development of the chick. Emphasize the facts of the care of the young, the inheritance of parental characteristics, etc.

e. Forms of special value to man. Make a study of the conservation of our food fish, birds and wild game.

f. Forms harmful to man. Study the extermination of the destructive rodents, the injurious birds, etc.

g. Industries, such as those dealing with fish, wool, furs, hides, dairy products, poultry, etc.

II. *Man, the Highest Expression of Life.* Chapters XXIII, through XXIX.

a. Man's subjugation of other forms of life. Have the pupils make out a complete list of the useful and harmful plants and animals, and the ways in which they are useful or harmful.

b. Comparison of man's life functions with those of other animals.

c. Structural adaptations. In a biology course, human anatomy should not be taught, but only the facts necessary to teach bodily development, control and adjustment. (1) Skeleton. Comparison with other vertebrates. (2) Position and use of the organs. If there is sufficient time, a dissection of a cat, rabbit, or other small mammal would help to show the relative position of the larger organs. (3) Nervous system. Give great emphasis to this study, especially the mental activities, habit formation, and nervous control. (4) Circulatory system. Care of wounds, burns, fainting, drowning; methods of bandaging, etc. Examination of blood. Emphasize the dependency of the whole system upon proper condition of the blood and good circulation. (5) Sense organs. Emphasize their structural connection with the nervous system and therefore with the entire body.

d. Essentials of man's physical development. (1) Food. Have the pupils make a diagram, showing the course of foods, and the changes that take place in the digestive tract. Discuss the kinds of foods, the amounts, combinations, and uses of foods. (2) Proper air supply. Explain the process of respiration; the use of air; the proper method of breathing; ventilation. (3) Water. Discuss the body's need of water; the process of excretion and the need of water for proper excretion. (4) Exercises. Discuss the effect on digestion, circulation, excretion, posture, right development of organs, etc. (5) Habit forming. Review the process of habit forming and discuss the effect of over-eating, lack of cleanliness of body, teeth, etc.; the effect of the use of tobacco, alcohol, physical abuses. (6) Care of the special organs. (7) Mental efficiency. Emphasize the fact that physical and mental efficiency are interdependent.

e. Man as a social being. Discuss the effect of personal hygiene upon the present and upon future generations; the regulations in regard to infectious diseases, garbage, sewage; inspection of public buildings as to lighting, cleanliness, fire protection, etc.; extermination of the house fly, the rat, etc.; the work of the public health department.

The last month or more should be used for practical outdoor study of insects, fungi, birds, trees, flowering plants, and a general summarizing of the entire course, clinching the essential principles of life and its activities.

PHYSICS

The familiar processes and devices of everyday life serve admirably to introduce the general principles of physics. When the principle has been thus established it may be shown how the ingenuity of man has applied the principle to the less simple devices which are a part of our modern life. No law or principle should be studied without abundant illustrative material from the pupil's experience. Even in electricity such material is available in the snapping of the fur on a cat's back when rubbed, the attraction of a rubbed rubber comb for small bits of paper, the lightning flash, the battery formed when metal touches the filling of a tooth, and several others.

There is no satisfactory single reference book for physics since college texts are largely mathematical, whereas the high school treatment is descriptive. Magie's *Principles of Physics* is probably as good as any.

The separate divisions of the subject are rich in literature and good books for each division are mentioned in the schedule. Black and Davis' *Practical Physics* is valuable for its descriptions of many modern appliances. C. R. Gibson's *Scientific Ideas of Today* is an excellent and interesting book.

FIRST TERM

- (1-49) Units, air, and water. Four weeks.

The usefulness and use of the metric system should be emphasized; also the principles involved in barometers and pumps.

See E. J. Houston's *Wonder Book of the Atmosphere*.

- (50-115) Kinetic theory; mechanics. Five weeks.

The kinetic theory should be emphasized as the most generally useful theory in physics. Constant reference should be made to it in explaining heat transfer, expansion, magnetism, electricity, radium, and x-rays.

See C. R. Gibson's *Scientific Ideas of Today*.

- (116-130) Thermometry, expansion. One week.

See Ogden's *Heat*. Use in next two sections, also.

- (131-196) Work, energy, change of state. Five weeks.

See Lodge's *Elementary Mechanics*.

- (197-206) Heat transfer. One week.

Analyze the action of an icebox, ice cream freezer, fireless cooker, and thermos bottle. The heating and ventilating system of the school (or other public building) should be examined and discussed.

Review. Two weeks.

SECOND TERM

- (206-217) Magnetism. One week.

Have pupils discover as many reasons as possible for believing the molecular theory of magnetism. The text suggests at least nine.

See Thompson's *Elementary Lessons in Electricity and Magnetism*.

- (218-239) Static electricity. Two weeks.

See *Lightning* in New International Encyclopaedia. Thompson's book (above) should be freely used here and throughout the discussion of electricity.

- (240-266) Electric currents. Two weeks.

Pupils should solve all problems in this chapter. By this means Ohm's law, the most important in electricity, will be mastered.

- (267-283) Effects of electric currents. One week.

Modern incandescent and arc lighting should be emphasized; also computation of electric bills on the watt-hour system.

- (284-313) Induced currents. Three weeks.
Electric light and telephone stations should be visited if possible.
- (314-350) Sound. Three weeks.
See Barton's *Textbook on Sound*.
Familiarity with and principles of band and orchestra instruments should be emphasized. Any catalogue of musical instruments is serviceable in this work.
- (351-407) Light. Three weeks.
Paragraphs 435, 436, 438, 444, 448 and 490 may be omitted without serious loss. The optics involved in the eye, eyeglasses, reading glass, camera, telescope, and microscope, should be emphasized.
See Thompson's *Light, Visible and Invisible*. (Use in next section, also.)
- (408-426) Invisible radiations. One week.
If possible, have a doctor demonstrate x-rays. A wireless station should be visited, if convenient.
See Kaye's *X-Rays*, also Morgan's *Wireless Telegraphy for Amateurs*.
Review. Two weeks.

CHEMISTRY

The study of Chemistry in the high school should not be undertaken, in general, except in the stronger four-year schools where adequate funds are available for competent instruction and for adequate equipment. It is better to concentrate the resources of the institution upon science work in physical geography, biology and physics until the time may come when the work in chemistry can be put in and handled well.

Exceptionally it may happen that it is desirable to introduce a course in chemistry with limited laboratory facilities. Such cases might exist in communities where the local interest in chemistry is unusual or where a teacher well trained in this subject is available. For such cases the following suggestions regarding equipment will be of some help:

The laboratory should be light and well-ventilated, and provided with an abundant supply of running water distributed to several sinks. Wall cases or lockers should be available both for the general stocks of chemicals and apparatus and for the individual outfits of the students. The cases devoted to the purpose of shelving the general stocks should be under lock and key, the key to be retained by the instructor in charge.

The individual lockers should also be provided with separate padlocks so that responsibility for all materials can be fixed.

A common kitchen table for each student in addition to the wall lockers will very well serve instead of the elaborate desks and lockers provided in general equipments of chemical laboratories. These tables may have ordinary native wood tops and will last a long time if protected by a finish composed of the following ingredients and applied as indicated:

Anilin Wood Stain

- | | |
|-------------------------|----------|
| 1. Copper sulphate..... | 1 part. |
| Potassium Chlorate..... | 1 part. |
| Water | 8 parts. |

Boil to dissolve, and apply two coats hot.

- | | |
|--------------------------------|------------|
| 2. Anilin..... | 180 grams. |
| Hydrochloric Acid—sp. gr. 1.2— | 270 grams. |
| Water..... | 1,500 cc. |

Apply two coats following No. 1, letting each coat dry alone. Finish with a cloth carrying raw linseed oil.

Near each table a 5-gallon stone jar, obtained from the grocery store, will serve as a receptacle for all solid waste materials which can not be washed down the sinks.

In most chemical manuals there is prescribed the doing of certain experiments with chlorine, gas, etc., which make the use of a fume closet or hood absolutely necessary. It is true that experiments of equal instructional value may be substituted for these which will not give off objectionable gases, and this is recommended for those laboratories in which hoods are not available. Hoods can be rather easily constructed, however, from Portland cement, some brick and a window sash, the whole when done by local labor being inexpensive and quite effective, especially if connected with a flue already existing which may be warmed up by a stove or furnace. The connection between the hood and the flue can be made with ordinary six-inch stovepipe made of galvanized iron. Such a pipe, if well painted previous to installation, will have a life of as much as ten years. In cases where it is not possible to install a hood, by a proper choice of time, experiments frequently may be performed near an open window, the time being chosen so that there is a free circulation of air out of the window and away from the operators.

A necessary part of every chemistry laboratory is a means for applying heat to the apparatus during the course of an experiment, and for this purpose where town gas is available nothing has been found better than the ordinary Bunsen

burner. A very good substitute for Bunsen burners can be made in which denatured alcohol serves as fuel, lamps such as are used in chafing dishes serving admirably for most purposes. These can be constructed in very serviceable form from flat, tin boxes such as are used for ointments, shoe blacking, etc., by filling such boxes with sand and cutting a circular hole in the cover. Regular alcohol lamps using wicks are still more convenient, while for high temperature work some form of alcohol blast lamp, such as is indicated in the subjoined list, must be used. For general heating purposes, in addition to Bunsen burners or alcohol lamps, an ordinary gasoline stove or a few electric hot plates are desirable.

For chemistry work in general it is desirable to use distilled water, and this must be done where the local supply is hard, mineralized, or loaded with organic matter. In most Oregon localities, however, the water is naturally pure and soft, and for almost every purpose in first year work can be used without further purification. A test for the sufficient purity of water for laboratory work would be the evaporation of a gallon or so in a clean enameled pan. Perceptible residue indicates that the water may be too heavily mineralized for the purpose in question. In such cases, an inexpensive form of still can be obtained which will supply all the water needed.

The lists of chemicals and apparatus representing the minimum requirements for doing the experiments which are indicated in the state texts, may be secured from the Superintendent of Public Instruction.

The instructor should provide himself with some larger, standard chemistry. Smith's *Introduction to General Inorganic Chemistry* is excellent. Bailey's *Textbook of Sanitary and Applied Chemistry* and Duncan's *Chemistry of Commerce* are also good books for the chemical library.

The text of McPherson and Henderson's *Chemistry* is divided into thirty-two chapters of fairly uniform content so that covering a chapter a week will finish the book in the allotted time. In most cases two recitations may well be put on the text and the third on the questions and problems (selected), and review.

The points of contact of chemistry and daily life or human progress should be emphasized. The cycle of carbon, the fixation of nitrogen, hard water, the chemical properties of soda, lye, etc., are topics of this nature.

The group relationships of the elements are of great importance and if properly learned will greatly lessen the subsequent effort necessary to learn the properties of the elements.

Latin

FIRST YEAR

FIRST SEMESTER—*Essentials of Latin*; Pearson.

FIRST SIX WEEKS—Through Lesson XIII.

Thoroughness should be insisted upon.

The first and second declensions should be learned, and the differences and similarities in case endings noted. The drill in the declensions should not be confined to the examples given in the text. The conjugation of the verb *sum*, so far as it is given, should be mastered, as well as that of the active voice of the verb *amo*. Other verbs of the first conjugation should be used in drill work.

The vocabularies should be carefully studied, and the pupil should be required to know the nominative and genitive singular, the gender, and the declension of each noun, and the principal parts of all verbs.

Emphasis should be laid upon the special uses of cases, as well as upon the cases following the different prepositions. Drill should be given in reading Latin, with special attention to the pronunciation and accentuation of the words.

SECOND SIX WEEKS—Through Lesson XXVI.

The second conjugation should be mastered, special emphasis being laid on the features that distinguish it from the first conjugation. The passive voice of both conjugations should also be thoroughly learned, and the rest of the conjugation of the verb *sum*.

In learning the third declension, the differences between the consonant and vowel stems should be carefully noted. The nominative singular form for all three genders of adjectives should be learned, and special notice taken of those cases in which the form is the same for different genders.

All special uses of cases should be emphasized.

Continue drill in reading Latin.

THIRD SIX WEEKS—Through Lesson XXXVII.

The third and fourth conjugations should be learned, the differences of the *-io* verbs of the third conjugation being noted. The following things should be emphasized during this time: Uses of the infinitive; demonstratives *is* and *idem*; relative *qui*; demonstratives *hic* and *ille*; irregular adjectives; interrogative *quis*; fourth declension.

Continue drill in reading Latin.

SECOND SEMESTER—*Essentials of Latin*; Pearson.

FIRST SIX WEEKS—Through Lesson L.

The following things should be emphasized during this time: Irregular verb *eo*; locative endings; expressions of place; numerals; fifth declension; comparison of adjectives, regular and irregular; verb *possum*; personal and reflexive pronouns; possessive adjectives; indefinite pronouns; special uses of cases; comparison of adverbs.

SECOND SIX WEEKS—Through Lesson LXIII.

The following things should be emphasized during this time: Form, declension, and meaning of participles; ablative absolute; formation and meanings of infinitives; indirect discourse; deponent verbs; subjunctive mode; uses of subjunctive; substantive clauses.

THIRD SIX WEEKS—Text completed.

The following things should be emphasized during this time: *cum* clauses; compounds of *sum*; imperative mode; gerund and gerundive; conditional sentences; impersonal use of verbs; supine; various ways of expressing purpose; periphrastic conjugations.

Throughout the year, as often as time permits, the reading selections following Lesson LXXVI should be used in class for sight reading.

SECOND YEAR

Caesar's Gallic War; Gunnison and Harley.

First Semester—All of Book I and first seventeen chapters of Book II.

Second Semester—Book II completed and Books III and IV. Daily drill in constructions. Frequent exercises in reading at sight will be found valuable.

THIRD YEAR

Cicero's Orations; Gunnison and Harley.

FOURTH YEAR

Virgil's Aeneid; Fairclough and Brown.

German

INTRODUCTORY NOTE

This outline is offered as a suggestion for a well-rounded course in German, not as an absolute standard from which there is no variation. If carefully followed, either in the spirit or in the letter, good results must follow. There is so much excellent material on the market, and so much being constantly brought out, that the progressive teacher need not always read the same stories. The latest catalogues of the leading publishing houses will show excellent new material from time to time. The aim has been to emphasize a German atmosphere throughout; to choose material that is interesting, yet graded in difficulty to suit the place for which it is recommended; to vary the sequence of selections in order to avoid the monotony of reading constantly the same kind of material; and to select matter representative of the best periods of German literature, trying always to keep step with the remarkable advance that the study of German has made in the United States in the last quarter of a century.

GENERAL STATEMENTS

In a general way the pupil may expect to gain from a successful course in German: (1) The ability to read with fair fluency, (2) some ability to speak and understand the German when spoken, (3) some knowledge of the history and literature of Germany, and the manners, customs and culture of the Germans, and (4) a better understanding of grammatical structure in general. Every effort to attain this goal should be made.

German in the Classroom.

The atmosphere of the classroom should be as distinctively German as possible. With a little thought and effort, German can be made the medium of instruction almost exclusively from the beginning, in the discussion of grammar and composition, as well as for reading, even by an American-born teacher. Make a list of the common phrases and directions used, and find their German equivalents. In grammar, Spanhoofd gives the German terms, and develops the main points in German, so that no difficulty need be experienced here. The reference list below gives several other "helps."

Pronunciation.

Since German is a living language and should be taught as such, the first and most important consideration is the acquir-

ing of a good pronunciation. To be quite successful, this instruction must be put upon a phonetic basis, *i. e.*, it should be made a matter of *speech sounds* not *letters*. This need not entail any special difficulty or the use of a technical vocabulary. Advancing from the known to the unknown, give first a simple description of the organs of speech and the method of making speech sounds in English, showing the difference between voiced and voiceless consonants, front and back vowels, etc. Then proceeding to the German, indicate the difference between the basis of articulation in the two languages, and show that the muscles of the mouth are much more active and more fully brought into play in German than in English. Only by a very marked rounding and protruding of the lips can the true German *o* and *u* be produced. In fact, with the exception of a very few consonants, corresponding German and English sounds are not identical.

For the presentation of this matter, the teacher will find Bagster-Collins: "Teaching of German in Secondary Schools," chapter 3; Bahlsen: "Teaching of Modern Languages," chapters 3 and 4, and Bacon: "German Composition," pages 255 to 277, very helpful. Careful drill on pronunciation should be kept up steadily and inexorably, until right habits are firmly fixed. Eternal vigilance is the price of good pronunciation, and care in this regard should never be relaxed. *Always* correct a faulty pronunciation.

Script.

The use of German script from the beginning is not to be recommended. Since it adds a new difficulty to the many already confronting the beginner, it is best to postpone learning it until near the end of the first year or in the second year. Then teach it so that the pupils will become fairly fluent in writing and reading it. Practice in it may then be given from time to time, but, on the whole, its continuous use should be discouraged, since it takes more time and effort than the benefits derived warrant, and few pupils ever become proficient. Although still used to a very great extent in Germany, few schools require its exclusive use, and, for the average German, a good Latin script is far more legible than the German that most pupils write.

Grammar.

In grammar the best motto is: Little theory and much application. Drill declensions and conjugations in sentence form and by German questions and answers rather than by pure paradigms. Give abundant *oral* practice on each grammatical point. If an exercise with the same amount of practice

on each of the forms were written, it would take hours, and then it would not be so effective as the oral work which is accomplished by spending a few minutes daily. The fundamentals of grammar should be learned in the first year, and the following years be spent in reviewing and adding to the work of the first year.

In learning principal parts of verbs it is well to give five instead of *three* forms, including the third person singular of the present tense and the perfect tense, *e. g., fallen, fiel, gefallen, er fällt, er ist gefallen*. This determines the *umlaut* in the present tense, and the perfect auxiliary. We might also speak about "principal parts" of nouns, *i. e., nominative, and genitive singular and nominative plural, e. g., das Buch, des Buches, die Bücher*. In the first two years, some 300 common nouns and the more common strong verbs should be learned, so that the principal parts can be quickly given. Since gender is a troublesome point with German nouns, the definite article should *always* be given with every noun learned. Except the rules for the gender of nouns ending in *—chen, —lein, —ei, —heit, —keit, —in, —schaft, —ung*, no general rules are of any great assistance and the gender of each noun must be learned by frequent use.

Vocabulary.

Vocabulary study and word building should receive careful attention, for only so will constant thumbing of the dictionary be forestalled. Keeping a notebook, in which names of naturally related subjects with their derivatives, are grouped, is a great help. For example, under "Die Familie" would be grouped the masculines—*Vater, Sohn, Bruder*, etc., and the feminines—*Mutter, Tochter, Schwester*, etc., then the derivative nouns like *Grossvater* and *Grossmutter*, the derivative adjectives like *brüderlich* and *väterlich*, and the derivative verbs like *bemuttern* and *sich verbrüdern*. (A good outline of such a list will be found in the appendix of Bacon's *Vorwärts*.) Another plan is to make word groups from a common stem, as—*alt, ällich, das Alter, das Altertum, veraltet*, etc. Such lists can be added to as new words are found in the reading throughout the course. Encourage pupils to think out the meanings from known stems and the context, instead of looking up every new word. An occasional spelling contest is another helpful and interesting way of fixing vocabularies.

Home Work.

Let home work be based on material that has been thoroughly worked over in class. Besides learning vocabularies, much copying of texts, writing out of the most useful inflections

of a large number of words, and answering German questions on the text, will fill the time at home. The work of the learner should be based upon such stages of imitation as: (1) Exact reproduction, (2) paraphrasing with variations of person, number and tense, and the substitution of other suitable words for those in the text, (3) free reproduction based on the text and closely following it, and (4) free composition, the last and most difficult achievement of the course. This can scarcely be effectively done until the fourth year of the course. Written work based upon material which the pupils have not thoroughly worked over, by oral practice, or otherwise, is almost sure to be poor. For pupils to write well in a foreign language, it must be done on the imitative basis.

Dictation.

Practice in writing German from dictation is very helpful in learning to spell and in training the ear as well as the eye. It should be begun early, and kept up late. At first, old material that has been thoroughly worked over in class should be used. Later, person, number, tense, or the order of words may be changed, or familiar words inserted, or substituted. Late in the course, new material may be used. Five or six minutes is enough for the actual reading. Then let each pupil correct his own paper in class.

Conversation.

Conversation should be spontaneous rather than based upon a text. While the questions included in many texts are valuable for home study, in class it is better for the teacher to form her own questions, letting an answer suggest the next question. The time to talk about breakfast, or dinner, and what you ate, is when someone in the text has breakfast, or dinner, and eats. In this way, most texts will furnish ample material for spontaneous conversation on most of the activities of life.

Translation and Reading.

Translation, as such, should be eliminated as soon as possible. The pupil can grow in power in German, only as he learns to feel and think in German, and this can only be accomplished by putting English as much in the background as possible. At first, some translation is necessary, but gradually we can make sure that a passage is understood by questions in German, and only the more difficult phrases and passages need be translated. This method should be varied, however, and occasionally an entire period should be devoted

to translation, without previous notice. Now and then, a passage may be assigned for careful written translation at home. When translation is done in class, the reading of the text in German should finish the lesson, so that the last impression left with the pupils is German. The German text should always be read in class. The way it is read, will usually show whether it is understood. Concert reading by the class is also good training.

Intensive Reading.

Beginning with the second year, and continuing throughout the course, about five lines of every reading lesson should be assigned for intensive study. On this passage the pupil should be prepared to answer, with book closed, any question on word or phrase. Such passages should be carefully chosen to afford rapid review of forms already studied and to avoid grammatical constructions not yet taken up by the class. From these suggestions it will be readily seen that the reading matter may and should form the basis of instruction for grammar, composition and conversation. In assigning the advance reading lesson, explain any special difficulties, and then expect the pupil (1) to read it aloud at home, (2) to translate it carefully, using vocabulary and notes, and (3) to study the German with a view to answering questions on it in German, both for content and phraseology. If the book has printed questions, these may be used for this purpose.

Poetry.

Too much time should not be given to learning poetry, especially for those pupils for whom this kind of work is very difficult. The learning of colloquial phrases and idioms may better be substituted for some of it. A few standard poems are very desirable, say one a month throughout the course, grading them in length and difficulty, and choosing them to fit the season. Several short ones are better than one long one. For Christmas learn "Stille Nacht," "Der Tannenbaum" and "O du fröhliche." In the spring learn Heine's "Mälied," "Du bist wie eine Blume" or "Frühlingslied." With the preterit tense of verbs learn "Heidenröslein," etc. Wherever possible, have the class sing German songs. It gives enthusiasm, aids pronunciation, and words are learned unconsciously. The "Deutsches Liederbuch," compiled at the University of Wisconsin, and Bacon's "Im Vaterland," contain excellent selections with good musical accompaniment. Collmann's "Easy German Poetry for Beginners" and Von Klenze's "Deutsche Gedichte" contain good selections of poems.

Scope of Two-Year and Four-Year Courses.

For the first two years, the two-year and four-year courses will be practically identical. Because of the greater immaturity of first-year pupils in the four-year course, the work may have to progress more slowly than outlined below. A little less grammar may be covered in the first year and, perhaps, one book less read in the second year.

Results.

At the end of the second year, the pupil should (1) be able to translate a piece of simple prose without previous preparation, (2) know the elementary facts of grammar, (3) be able to put into German, based upon the passages read, simple sentences, illustrating various points of grammar, and (4) be able to answer in fairly correct German, simple German questions on the content of what he has translated. At the end of the four-year course, the pupil should (1) be able to read at sight any passage of German which does not contain special or technical difficulties, (2) be conversant with the more advanced grammatical phenomena, and (3) be able to use fairly correct German in discussing, either orally or in writing, the simpler aspects of daily life, or his reading.

FIRST YEAR.

Texts.

Spanhoofd, A. W.—*Elementarbuch der Deutschen Sprache*.
Guerber—*Märchen und Erzählungen*, Part I.
Müller and Wenckebach—*Glück auf*.

First Lessons.

For the first day, a little talk on Germany and the Germans would be appropriate. Attention may be called to the relation of the German and English language and the number of cognate words, as—heart-Herz, deep-tief, etc., but no detailed explanation of "Grimm's Law" should be given. Then take up the alphabet. German words should always be spelled with the German letters. This will not be difficult if the alphabet is learned at the beginning, and a little practice in spelling words is given. Go over the alphabet several times, to be sure that every pupil pronounces the letters correctly before the alphabet is assigned to be learned. Singing it to music is also a help. In the first work, it is necessary to proceed very slowly and carefully. A baby must crawl before it learns to walk, and, as far as German is concerned, beginners are babies. For the first week, while pronunciation is being learned, little or no outside work should be assigned, so that wrong habits may not be formed.

For the second day, review the alphabet, explain the vowel sounds and drill on the vowel triangle. It is better to drill these sounds in words, and abundant illustrations, especially of monosyllables, should be provided. On the third day, review the vowels and explain and drill the consonants. Now page 15 in Spanhoofd may be taken up, using it only for spelling and pronunciation. Spell each word first in German and then pronounce it. The pupil who spells *fow-ah-tay-eh-air* has little trouble in pronouncing *Vater*. Translation will not be necessary; because of the cognates the pupils intuitively understand. For home work, a few lines may be assigned to be spelled out and written. The differences in the German type will occasion some confusion. The letters that are very similar should be carefully distinguished (see page 2 in Spanhoofd).

For the fourth and fifth days, continue work on spelling and pronunciation, and work over the questions and answers carefully, both with and without the books. The class is now ready to develop the *Grammatik* and learn the vocabulary. The English version of the grammar lesson, which follows, is for reference at home and to correct misunderstanding; in class, the grammar is developed in German. The exercises should first be worked out in class, and then some assigned for home work. No attempt should be made to have all the exercises written. If they are used for rapid oral drill, they serve the purpose with much less time and labor. This time should be spent on learning vocabulary and grammar.

Each new lesson should first be worked out in class. A good plan is to have the pupils close their books and the teacher develop the lesson orally, using objects in the school room (table, chairs, etc.). Then assign the reading and study of this same material, in the book, for home work. Then develop the grammar and learn the vocabulary, and lastly, work out the exercises. For the first lessons, two proverbs should constantly be kept in mind: "Aller Anfang ist schwer" and "Eile mit Weile."

Later Work.

After the fourth lesson in Spanhoofd, the first story in the "Märchen" may be taken up. As a preliminary, explain briefly the preterit tenses, learning *war* and *hatte*. Drill carefully on pronunciation in reading the story. The frequent repetition of phrases affords excellent practice. After the seventh lesson, the first pages of "Glück auf" may be read. This brings in plurals of nouns, but a brief explanation obviates any difficulty, and makes this work easier when reached

in the grammar. It is well, too, to introduce the numerals gradually and then they will not be so formidable when lesson 15 is reached.

The work of the first semester should carry through lessons 12 or 14 in Spanhoofd with about 16 pages of "Glück auf" and five or six stories in the "Märchen." The greater part of each recitation should be devoted to Spanhoofd, and care must be taken not to advance too rapidly. Be sure that each grammatical point is thoroughly mastered before a new one is taken up, and then review the old constantly. In the class drill on forms, however, there should be no dawdling. Oral drill should be rapid and without hesitation. This is easily done if the first assignments are not too long and are well drilled.

In the second semester the work should continue in the same manner as in the first, but progress may be more rapid. It may be found difficult to finish Spanhoofd entirely the first year. In that case, work through lesson 28, and leave detailed study of the subjunctive until the second year. Brief explanations of subjunctive forms may be given, however, as they are met in reading. In "Glück auf" take up sections three and four before section two, because the poetic analysis is more abstract, and more difficult in comprehension. The myths, and the stories of the "Märchen," will be read with avidity now. If only one reading text is used in the first year, "Glück auf" seems preferable, but classes usually enjoy more stories. Another excellent beginners' reader is, "Vorwärts," by P. V. Bacon. It is very well graded, beautifully illustrated and contains interesting material with a real German flavor.

Paraphrasing in connection with the reading is excellent practice. Have passages rewritten with change of person, number or tense.

SECOND YEAR.

Texts.

Baumbach and Wildenbruch—Es war einmal; edited by Bernhardt.

Manley—Ein Sommer in Deutschland.

Wildenbruch—Das edle Blut.

Gerstäcker—Germelshausen.

Hauff—Der Zwerg Nase.

Schiller—Wilhelm Tell.

Review.

For the first two weeks of the second year a rapid review of elementary grammar should be given. Assign it by topics

in connection with the first text read, lessening the assigned reading accordingly. Lists of simple sentences to illustrate each topic should be assigned, and a good deal of oral rapid-fire drill of sentence-paradigms be given. Topics may be taken as follows:

1. Nouns, declension, classification and plurals. Scheme for a bird's-eye view of forms. (Spanhoofd, pp. 232-4.)

2. Adjectives, declension — strong, weak, mixed. Comparison.

3. Pronouns, declension. Personal, interrogative, possessive, reflexive, relative, demonstrative. *Wer* and *was* as relatives. Use of *da* and *wo*, plus a preposition.

4. Prepositions—governing dative, accusative, dative and accusative, and genitive.

5. Verbs. Active voice. Weak and strong. *Haben* and *sein* as auxiliaries.

6. Verbs. Reflexive, compound, impersonal. Modal auxiliary. Verbs governing dative.

7. Verbs. Passive voice. Distinction between *werden* and *sein* as auxiliaries. Word order.

8. Verbs. Uses of subjunctive.

Where Spanhoofd has not been completed in the first year, the subjunctive will be taken up in the regular class work later.

Reading.

Along with this review, read for the first month some of the charming modern fairy tales in "Es war einmal." The next month or so may be spent on the first 15 lessons of "Ein Sommer in Deutschland." This has exercises for more grammar drill and composition. The dialogue form of the text lends itself admirably to conversation and dramatization. For reading the text in German, assign parts to different students and try to make the work as live as possible. It is well occasionally to assign these parts beforehand, so that the pupils can prepare their readings. The same parts may also be assigned to several groups and a contest in reading held. At other times assign the reading *extempore*. The remaining lessons on "Ein Sommer in Deutschland" may better be sandwiched in between other readings, so that the class does not tire of this type. "Das edle Blut" will complete the work of the first semester.

In the second semester, read some more of "Es war einmal" and "Ein Sommer in Deutschland," and for stories, read "Germelshausen" and "Der Zwerg Nase." About 150 standard pages (300 words to the page), for class, and 50 pages for outside reading should be done during the year.

The fundamental facts of grammar and syntax must be kept ringing in the pupils' ears continually. What was learned in the first year must be constantly driven home. No regular composition book is needed. The reproductive exercises in most of the simple texts may be used instead. For those pupils who take only two years of German in high school, and are not likely to continue it in college, some provision should be made to give them a taste, at least, of the best German literature. With such a class, the last six or eight weeks might well be spent on "Wilhelm Tell." This will give time only for certain characteristic and strong scenes and acts. The teacher will supply the connecting links. Treated in this way, the work will not be too difficult, and can be made very beneficial and enjoyable.

THIRD YEAR.

Texts.

Bacon, P. V.—German Composition.

Collmann—Easy German Poetry.

Baumbach—Der Schwiegersohn.

Heyse—Die Blinden.

Fulda—Unter vier Augen.

Benedix—Der Prozess.

Riehl—Das Spielmannskind; Der stumme Ratsherr.

Freytag—Aus dem Staat Friedrichs des Grossen.

Fouque—Undine.

Schiller—Der Geisterseher.

Schiller—Wilhelm Tell.

Composition.

With the third year, a systematic study of German syntax should be begun and one hour a week during the third and fourth years, spent on grammar and suitable composition. Perhaps the best book for this purpose is Bacon's "German Composition." Each lesson has a German historical sketch, upon which syntactical and word study is based, and there are abundant, well-arranged exercises. There are good pictures for conversation and the grammatical points are illustrated from the classics. The lessons are somewhat longer than can be done in one day. The story may be read at the end of one of the regular reading recitations, and conversational work done on it. The idiomatic phrases and work study may be given a few minutes a day, each day, during the week and formal grammar and composition will then take one day.

Some time, too, should be spent on letter-writing. Choose topics of interest to the pupils and emphasize simplicity and

directness of statement. This work, at least at the beginning, should be imitative rather than original and based on good German models. Holzwarth's "Gruss aus Deutschland" has many good interesting specimens as has also Thomas' "Practical German Grammar." Read to the class occasionally a classical example from the correspondence of Schiller and Goethe or Bismarck.

In the third year, the reading should approximate 250 standard pages (300 words) in class, and 50 to 100 pages for outside. "Die Blinden" makes an excellent text for the beginning, followed by "Der Schwiegersohn" and a one-act play like "Unter vier Augen," or "Der Prozess," for the first semester. One of Freytag's "pictures," (Bilder aus der deutschen Vergangenheit), may be substituted for "Der Schwiegersohn." In the second semester, part of Fouque's "Undine," or "Der Geisterseher," will give an interesting taste of Romanticism. This may be followed by a short course of reading in lyrics and ballads, and one of Riehl's novelettes, like "Der stumme Ratsherr," or "Das Spielmannskind." The place of honor, however, in the third year belongs to "Wilhelm Tell."

FOURTH YEAR.

Texts.

Storm—Immensee.

Goethe—Hermann und Dorothea.

Goethe—Egmont.

Goethe—Sesenheim Periode.

Sudermann—Frau Sorge.

Ludwig—Zwischen Himmel und Erde.

Schiller—Wallenstein; Das Lied von der Glocke.

Kleist—Prinz Friedrich von Homburg.

Reading.

"Immensee" will make a good beginning for the fourth year. The pupils are now mature enough to read it quickly and appreciate its delicate charm better than in the second year. "Hermann und Dorothea" will be the classical drama for the first semester, with "Iphigenie" for outside reading. Follow with the "Sesenheim Periode" from "Dichtung und Wahrheit," and if time permits, finish with "Wallenstein's Lager."

In the second semester, take first an historical or psychological novel—not in entirety, but in extracts sufficient to give a good idea of plot, style and character. Parts of it may be assigned for outside reading. For this reading, Sudermann's "Frau Sorge," or Ludwig's "Zwischen Himmel und

Erde" are good. Assign Hauff's "Lichtenstein" for regular outside reading. Other good novels from which a choice may be made, are Scheffel: "Ekkehard"; Freytag: "Soll und Haben"; Keller: "Romeo und Julia auf dem Dorfe." Then take Schiller: "Das Lied von der Glocke" and "Egmont." Finish with a romantic drama, as Kleist: "Prinz Friedrich von Homburg," or Hebbel's "Agnes Bernauer."

Lessing may be best studied from a simple German account of his works, (Keller: "Bilder aus der deutschen Litteratur") with two or three characteristic scenes from "Minna von Barnhelm," the inimitable parable of the three rings from "Nathan der Weise," and, perhaps, a touch of prose ("Laokoon" or "Hamburger Dramaturgie"). Pupils will thus become better acquainted with him and better prepared to appreciate him later, than by spending two or three months in reading "Minna" alone. During the year, about 350 standard pages should be read in class and 150 to 200 pages in private. This amount cannot be thoroughly studied, but thorough study belongs rather to the college or university. The aim should be to learn to read easily and rapidly, but with general, intelligent appreciation. The class should forget, as far as possible, that they are reading a foreign language.

The classics should be treated much as an English classic, noting the setting, the life of the author, his relation to his time and his place in the world of literature. This may be done gradually as the work is being read. These literary discussions must necessarily be conducted in English, but German will be used for all the other exercises of the classroom. A systematic study of German literature is not possible, but the high points in literary development can be touched. Bernhardt: "Deutsche Litteraturgeschichte," gives a good brief summary in German; Keller: "Bilder aus der deutschen Litteratur" is more in detail, but in simple German. In the classical dramas or lyrics the elementary facts of meter and rhythm should be brought out. Germany and the Germans may well claim some attention in the fourth year. Schweitzer's "Deutsches Lesebuch" offers good material. A "Rundreise" through Germany serves as a basis for the introduction of abundant folk-lore, historical and descriptive sketches and poems.

OUTSIDE READING

Pupils should be required, or at least encouraged, to do some private reading in German, upon which they should report to the teacher either orally or in writing. It improves class work, stimulates the pupil's ambition and interest, makes

him more self-reliant, enlarges his vocabulary, accustoms him to proper constructions, and gives him a more intimate acquaintance with the German people.

In the first year, the teacher may read or tell very simple, short stories or anecdotes to the class occasionally, asking questions on them in German and having the pupils retell them. Then encourage them to read and report on others, say one from each pupil every two weeks in the second semester. Have the stories retold in simple German rather than memorized. A great deal of reading will be done to find a story that just suits, and the pupils will be delighted to find that they can "really read." In the second year encourage short stories about Germany—customs, people, cities, festivals, etc. Assign four or five pages a week. In the third year, short narratives and simple historical sketches, and in the fourth year longer stories, plays, biographical sketches and extracts from history will be appropriate. In the third and fourth years, two books a semester may be required, and an extra credit of one per cent given for each additional book read.

If possible, have each pupil keep a notebook in which a short record of every book read is kept, covering such points as—exact title, name of author, number of pages, names of hero, heroine and other important characters, time and place in which the story is laid, a *very* short synopsis of plot and lastly a frank answer to the question, "How did you like it"? If this can be done in German so much the better, but it should not be required. The school library should contain as much simple, interesting reading material as possible and the pupils should be encouraged to use it freely. The following list will give good material suitable for each year:

FIRST YEAR.

Allen—Daheim; Herein.

Fahsel, A.—Allerlei.

Fick, H. H.—Dies und Das; Hin und Her; Neu und Alt.

Grimm, J. L. and W. K.—Kinder und Hausmärchen.

Martini—First German Reader.

Seeligmann, K.—Altes und Neues.

Stoltze—Bunte Geschichten.

Volkman (Leander)—Kleine Geschichten; Träumereien.

Bacon, P. V.—Vorwärts.

SECOND YEAR.

Bacon, P. V.—Im Vaterland.

Betz, ed.—Till Eulenspiegel.

Bülow (Arnold)—Fritz auf Ferien.

Guerber—Märchen und Erzählungen; Part 2.
Hewett—German Reader.
Hillern—Höher als die Kirche.
Holzwarth, C. H.—Gruss aus Deutschland.
Lambert, M. B.—Alltägliches.
Mosher, W. E.—Willkommen in Deutschland.
Spyri—Moni der Geissbub; Rosenresli.
Storm—Geschichten aus der Tonne.

THIRD YEAR.

Auerbach—Brigitta.
Baumbach—Sommermärchen.
Blüthgen—Das Peterle von Nürnberg.
Bülow (Arnold)—Fritz auf dem Lande.
Ebner-Eschenbach—Die Freiherren von Gemperlein.
Eckstein—Der Besuch im Karzer.
Eichendorff—Aus dem Leben eines Taugenichts.
Freytag—Die Journalisten.
Frommel—Eingeschneit.
Gerstäcker—Irrfahrten.
Heyse—L'Arrabiata; Anfang und Ende; Das Mädchen von Treppi.
Hoffmann—Meister Martin der Kufner.
Rosegger—Der Lex von Gutenhag.
Saar—Die Steinklopfer.
Seidel—Leberecht Hühnchen.
Storm—In St. Jürgen; Pole Poppenspäler.
Zschokke—Der zerbrochene Krug; Das Wirthaus zu Cransac; Das Abenteuer der Neujahrsnacht.

FOURTH YEAR.

Dahn—Ein Kampf um Rom.
Freytag—Soll und Haben; Das Nest der Zaunkönige.
Goethe—Goetz von Berlichingen; Egmont; Iphigenie; Dichtung und Wahrheit.
Hebbel—Agnes Bernauer; Die Nibelungen.
Hein—Auswahl Deutscher Prosa der Gegenwart.
Keller—Romeo und Julia auf dem Dorfe; Kleider machen Leute; Das Fähnlein der sieben Aufrechten.
Keller, I.—Bilder aus der Deutschen Litteratur.
Kleist—Michael Kohlhaas.
Lessing—Minna von Barnhelm; Nathan der Weise; Emilia Galotti.
Polenz—Der Büttnerbauer.
Scheffel—Ekkehard; Der Trompeter von Säckingen.

Schiller—Der dreissigjährige Krieg; Jungfrau von Orleans; Maria Stuart.

Schurz, Carl—Lebenserrinerungen.

Schweitzer-Simonnot—Deutsches Lesebuch für Quarta und Tertia.

Spanhoofd, A. W.—Aus Vergangener Zeit.

Spielhagen—Das Skelett im Hause.

Kron—German Daily Life.

Manley and Allen—Four German Comedies.

German Reference Library for Teacher and School.

Every trade requires its tools, and for the teacher, the most important ones are in the library. A few of the most helpful books are given here:

Methods.

Bagster-Collins—The Teaching of German in Secondary Schools.

Bahlsen—The Teaching of Modern Languages.

Report of the Committee of Twelve.

Breul, Karl—The Teaching of Modern Foreign Languages and the Training of Teachers.

Rippmann, W.—Hints on Teaching German.

Walter, Marx—Die Reform des neusprachlichen Unterrichts.

Russell, J. E.—German Higher Schools.

Language, Etc.

Lyon, Otto—Abriss der deutschen Poetik.

Weise—Unsere Muttersprache, ihr Werden und ihr Wesen.

Borinski—Deutsche Poetik.

Feist—Die deutsche Sprache.

Phonetics.

Rippmann, W.—Elements of Phonetics.

Siebs, Th.—Die deutsche Bühnenaussprache.

Hempl—German Orthography and Phonology. (No. 2608, State List II.)

Viëtor—Die Aussprache des Schriftdeutschen.

Grandgent—German and English Sounds. (No. 2606, State List II.)

Viëtor—German Pronunciation, Practice and Theory.

Bacon, P. V.—German Composition.

Dictionaries.

Fluegel, Schmidt and Tanger—Dictionary of the English and German Languages. 2 vols. (No. 2615, State List II.)

Breul—Heath's German-English and English-German Dictionary.

Duden—Orthographisches Wörterbuch der deutschen Sprache.

Grammars.

Thomas, C.—Practical German Grammar. (No. 2617, State List II.)

Krause-Nerger—Deutsche Grammatik für Ausländer.

Curme—A Grammar of the German Language.

Florer, W. W.—Questions on Thomas' German Grammar with Essentials of Grammar in German.

History.

- Henderson, E. F.—Short History of Germany.
Stoll, H.—Geschichtliches Lesebuch. In one vol.
Kürschner—Das ist des deutschen Vaterland.
Dawson, W. H.—Evolution of Modern Germany.

History of German Literature.

- Thomas, C.—History of German Literature. (No. 2616, State List II.)
Thomas, C.—Life and Works of Friedrich Schiller. (No. 2614, State List II.)
Heinemann, K.—Deutsche Dichtung.
Lewes—The Story of Goethe's Life.
Hosmer—Short History of German Literature.
Keller, I.—Bilder aus der deutschen Litteratur.

Magazines.

- Aus Nah und Fern.
Monatshefte für deutsche Sprache und Pädagogik.

Guides and Aids for Classroom German.

- Florer, W. W.—Material and Suggestions for the Use of German in the Classroom.
Stewart, C. T.—Classroom German.
Allen, P. S.—Hints on the Teaching of German Conversation.
Lambert, M. B.—Alltägliches.
Wolf and Florer—Guide for the Study of Goethe's Hermann und Dorothea.

History

Constant emphasis should be placed upon geography in all courses in History. As the ability to outline a book or article is valuable in all lines of work, it is suggested that map and notebooks both be kept.

At the present time especially, magazines contain many articles that link the past with the present. Several good periodicals should be in the library. Pictures should be used whenever possible. An interesting collection can be made in a short time from magazine and newspaper clippings.

No time is allowed for reviews in this outline.

ANCIENT HISTORY

The brief sketch of so many nations at the beginning of History makes it a hard period to cover. The time necessarily spent here makes it impracticable to try to cover all of Greek History.

FIRST SEMESTER

First Six Weeks. Botsford, chapters 1 to 7.

Emphasize the gifts each nation has made to civilization, the development of writing and commerce, and the influence of the religions upon morals and civilization. The work of modern archaeologists will be found interesting and helpful.

It is suggested that much more time be spent upon Hebrew History than the text requires, in order to fix the familiar Biblical names and events in their proper order, and correlate Jewish History with that of other nations as often as possible.

Second Six Weeks. Chapters 7 to 16.

A week or more can be spent profitably upon the myths of early Greece. As the Roman names of the gods are usually used, it is helpful to teach both at this time.

The influence of Greek religion upon Greek art should be kept in mind all through the study. Greek architecture should be carefully studied until all parts are familiar and the orders easily recognized.

Third Six Weeks. Chapters 16 to 24.

Make sure that the importance of Marathon is clearly understood. The good and bad in Athenian civilization should be noted. Study the literary and artistic productions of the age of Pericles as much as possible. The plots of the dramas are interesting to pupils, and serve to fix the Greek ideas of religion.

Books—Arnold's "Stories of Ancient Peoples," Shaw's "Stories of the Ancient Greeks," Morey's "Outlines of Greek History," Gayley's "Classic Myths."

ROMAN HISTORY

SECOND SEMESTER

First Six Weeks. Chapters 24 to 32.

Macedon—two weeks. Chapters 24 to 28.

The rise of Macedon shows the worst side of Greek character; the Achean League shows a new spirit acquired too late. Emphasize the importance of Arbela and the influence of Hellas over the East.

Rome—four weeks. Chapters 28 to 32.

Give several days to the myths of early Rome.

The power of the Senate and the many attempts to form a popular government are most important. During this and the following period, Rome's problems were much like our own—slavery, immigration, expansion, right of suffrage, wealth in the hands of a few, and the "back to the land" movement. These should be emphasized.

Second Six Weeks. Chapters 32 to 39.

Emphasize the organization and order of Roman expansion, the necessity of the Punic Wars, and the real meaning of the battle of the Metaurus, and the effects of conquest upon Rome.

The reform movement begun by the Gracchi and continued to Augustus is very important: 1. Because the remedies used were very inadequate. 2. Because it accustomed the people to look to one man for deliverance, and caused them to override their constitution, resulting in monarchy. The organization of the empire is important as the real reason for its endurance.

Third Six Weeks. Chapter 39 to end.

The life and manners of the Romans should occupy several days.

Chapters 42 to 44 are very important. The causes of the fall of the empire and the rise of feudalism need much study.

Emphasize, also, the rise of the power of the papacy, the work of Clovis, Salic or Teutonic law. Put as much emphasis upon these last topics as possible in order to lighten the course in Medieval History.

Books—Harper's "Classical Dictionary of Antiquities" is very valuable. Guerber, "Story of the Romans"; West, "Ancient World"; Seignobos, "History of the Roman People"; Morey, "Outlines of Roman History"; Myers, "Medieval and Modern History."

MEDIEVAL HISTORY

FIRST SEMESTER

First Six Weeks. Chapters 1 to 13.

Cover the first nine chapters as rapidly as possible, but emphasize points not covered in Roman History. Feudalism, Teutonic law, the power of the church, battles of Tours and Hastings, the work of Alfred and Charlemagne are the most important topics. It will be necessary to use great care in regard to chapter 11, and similar chapters following, to make the pupil see the medieval conception of church and state. The religious zeal and stupidity of the crusading movement should be carefully developed, as well as the motives and results.

Second Six Weeks. Chapters 13 to 18.

The revolts of the nations against the power of the papacy, and the various controversies, with the final settlements, are extremely important. Other topics are the Magna Charta and the first parliaments, causes of the Hundred Years' War, the importance of the battle of Orleans, the invention of printing, the Hussite movement, and the effects of the Mongrel invasion upon Russia.

Third Six Weeks. Chapter 18 to page 326.

Three weeks should be given the Renaissance. Students should know the early methods of painting and styles of architecture, brief biography of greatest painters and literary men, and recognize twenty or thirty pictures produced at this period. Spend one week on exploration. Spend two weeks on reformation. The differences between the teachings of Luther, Calvin, and Zwingli should be learned. Emphasize why Charles did not attempt to check the movement immediately.

MODERN HISTORY

SECOND SEMESTER

First Six Weeks. Page 326 to Chapter 31.

Emphasize the real cause of the break with Rome and the Anglican Creed, the development of England under the Tudors, and the importance of the defeat of the Armada. Some stories of the heroism of the Dutch should be read. The settlement of the religious difficulties in France, the causes of the Thirty Years' War, the motives of the different nations, and the final settlement are important. The work of the great French ministers, and the effects of the reign of Louis XIV need emphasis. In chapter 38, the religious and financial difficulties that

caused the Civil War, the reasons for the failure of the whole movement, and the final settlement in 1688, are important. The reforms of Peter and the work of Frederick the Great need emphasis, also.

Second Six Weeks. Chapters 31 to 35.

The Industrial Revolution is the only topic of great importance until the French Revolution is reached. A week should be spent upon the conditions leading to the revolution. The successive steps by which France was led to overthrow the monarchy, the spirit of enthusiasm, the outside interference, need considerable emphasis. The important topics under Napoleon are his work as a statesman, the causes that led to his downfall, and the new boundaries made in 1815.

Third Six Weeks. Chapter 35 to end.

Emphasize the great periods of revolution—1830, 1848, and 1870. The growth of the spirit of nationality causing the formation of Belgium, Italy and the German empire, the spirit of reform, and the movement toward industrial democracy are important. The expansion of the nations and the necessary rivalry of England, Germany and Russia, and Austria and Italy, the alliances and problems as they were in 1914 should be carefully developed.

Books—Emerton, "Introduction to the Middle Ages"; West, "Modern World"; Robinson and Beard, "Development of Modern Europe"; Seeborn, "Era of the Protestant Revolution"; Gardiner, "French Revolution"; Guerber "Stories of Old France," "Stories of Modern France."

ENGLISH HISTORY

It is suggested that Colonial History be taught as a part of English History, in order to allow time for a brief course in State History and government during the study of American History. The references are made to James and Sanford, as most pupils who take English History expect to take American History the following year.

FIRST SEMESTER

First Six Weeks. Cheyney, pages 1 to 156.

In the first three weeks, emphasize the importance of England's coming under the influence of the Catholic church, the settlements made by new tribes, the reign of Alfred, and the development of Saxon government. In the second three weeks, the effects of the Norman conquest, feudalism; the conflict

between church and state under William I, William II, and Henry I, and the development of the royal judicial powers should be emphasized.

Second Six Weeks. Cheyney, pages 156 to 276.

Topics—Religious: Emphasize the various phases taken by the struggle between church and state.

Political: The abuses that led to the Great Charter, and its contents, with frequent struggles to keep these privileges, and the first parliament.

Industrial: Rise of guilds, causes of unrest among laborers and methods of settlement.

Military: Conquest of Scotland, causes and results of Hundred Years' War and War of Roses.

Third Six Weeks. Cheyney, pages 276 to 382; James and Sanford, pages 1 to 35.

Political: Character and personal rule of the Tudors. Financial problems.

Trade and Commerce: Development of sea-power, leading to explorations. Foreign policy to aid Dutch against Spain, leading to war. Importance of defeat of Spanish Armada. Trading companies started.

Labor Troubles: Elizabethan Poor Laws and labor regulations.

Religious: Influence of reformation, separation of English church from Rome, Anglican creed, influence of religious question upon reign of Elizabeth.

Literary: Introduction of printing and its influence upon development of literature.

SECOND SEMESTER

First Six Weeks. Cheyney, pages 382 to 499; James and Sanford, pages 35 to 104.

Political: Contrast and compare attitude and character of the Tudors and Stuarts toward church and state. Emphasize new demands of people, Petition of Right, and work of Strafford.

Religious: Growth of factions and influence upon colonies; work of Laud.

Commercial: Influence and power of trading companies. Effects upon king and people of rising prices caused by influx of silver from the New World.

Civil War: Causes, reforms and divisions in Long Parliament; influence of Cromwell's army; Cromwell's policy at home and abroad; causes of failure; purpose of Navigation Acts and results.

Rise of political parties.

Colonial: Mayflower compact; beginnings of Union, and growth of popular government.

Second Six Weeks. Cheyney, pages 499 to 576; James and Sanford, pages 104 to 142.

Political: Constitutional government under William and Mary; rise of cabinet government under Queen Anne; political degeneracy under Walpole; rise of Methodism, and agitation for reform.

Foreign Policy: Interference in European wars, causing wars in America and India; gains made in 1713 and 1763.

Colonial: Difference between English and French policy, and results.

Third Six Weeks. Cheyney to end; James and Sanford, pages 142 to 182.

Causes for American Revolution resting upon differences in theory; reasons for England's colonial policy.

Political: Agitation for better representation; divided sentiment in regard to American colonies for freedom of speech and press; work of Pitt.

Causes for interference in Napoleonic war, and results; reforms in church and state, 1832-1846; home rule question; acquisition of Egypt and Australia; work of Gladstone; present government and policy toward Russia, France, and Germany.

Books—Green, "Short History"; Stubbs, "The Early Plantagenets"; Cheyney, "Introduction to Industrial and Social History"; Creighton, "The Age of Elizabeth"; Gardiner, "First Two Stuarts and the Puritan Revolution."

CIVICS

FIRST SEMESTER

First Six Weeks. James and Sanford, chapters 10 to 14; Forman, chapters 1 to 17.

Three weeks can be given profitably to these chapters with the emphasis upon chapters 10 and 13. Bring out clearly the causes for England's policy, and the circumstances in England and Europe that aided the colonists.

Emphasize strongly the tendencies toward disunion during the critical period, and the influences at work in the Constitutional Convention.

The opening chapters of Forman should be taken rapidly with care regarding meaning of terms. Much that is valuable is in the fine print at the end of the chapters. Several things have been changed since the text was published; for instance, the power of the Speaker and the method of appointing committees. Emphasize the cabinet more than in the text. Haskin is the best on this subject. Constant reference should be made to the Constitution itself.

Second Six Weeks. Forman, chapters 17 to 30.

Spend about two weeks on State Constitution, using the Oregon Blue Book in connection with chapters 19 to 21, and three days on chapter 22, with comparison of local county government.

Omit chapters 23 and 24 (Town and Townships).

The study of chapter 25 should include a study of local charter and ordinances, and a brief comparison of several plans of commission form of government.

Emphasize the importance and influence of the national convention, also its extra-constitutional character. Compare Oregon's system of electing delegates as found in statutes relating to elections, especially § 3349 and § 3350.

Sample ballots and pamphlets to voters for primaries and regular elections should be used.

Third Six Weeks. Finish Forman.

Chapters 30 to 36, 39 and 40 are very important.

AMERICAN HISTORY

SECOND SEMESTER

First Six Weeks. James and Sanford, pages 215 to 305.

Emphasize: 1. Financial conditions and Hamilton's measures. 2. Diplomacy—This is a most interesting field for diplomatic study, especially the periods 1793-1797, and 1806-1812. The problems then were very similar to present conditions. Intensive study is needed on the Orders and Decrees to understand the causes of the War of 1812. The European background should be kept clearly in mind.

Other Topics of Interest: Disloyalty in the West; threats of disunion; rise of parties; purchase of Louisiana; rise of tariff question; Missouri Compromise and Monroe Doctrine.

Biographies for special reports—John Adams, J. Q. Adams, Hamilton, and Jefferson.

Second Six Weeks. James and Sanford, pages 305 to 435.

Important Topics: Webster-Hayne debate; slow growth of feeling against slavery in the North; causes of panic of 1837; the reason the Democratic party became identified with slavery; rise of Republican party; causes of Mexican War; the Oregon Question; Dred Scott Decision, and Lincoln-Douglas debates.

Two weeks are suggested for the Civil War with two daily reports. Emphasize geography; preparations; resources, and the blockade.

One week should be given to Reconstruction, giving special attention to the changing sentiment in Congress culminating in the Reconstruction Acts and impeachment of Johnson.

Third Six Weeks. James and Sanford, to end.

Four Weeks: Emphasize our shifting tariff and financial policies; panic of 1893 and campaign of 1896; rise of Populist, Greenback and Socialist parties; difficulties of Cleveland's administration; causes of the Spanish-American War, acquisition of Panama and attitude of Colombia; attempts to control corporations and labor troubles.

Two Weeks on Oregon History: It is suggested that this be put at the end of the year. It could be placed at the beginning of this semester, at the time of the Lewis & Clark Expedition, or the Oregon Treaty; but, in so doing, it seems to break the continuity of the course.

Channing's is the best to use for a textbook, but Schafer's History is needed also. Emphasize the importance of rivers and passes, in influencing Oregon History.

Books—1 Civics: Ashley, "The American Government"; Woodburn, "American Republic" and "Political Parties and Party Methods"; Beard, "American City Government."

2. History: Elson, "History of the United States"; Fiske, "Critical Period"; Muzzey, "American History"; Sparks, "Expansion of the American People." McMaster and Schouler are very fine. The books of the American History series are good but rather difficult.

Bookkeeping

The aim of the course in bookkeeping should not be merely to teach the art of classifying and recording business transactions and facts systematically, but also to give the students a general knowledge of business. To accomplish this result, each step should be carefully explained and illustrated with some transaction or fact taken from the business world, with which the students are already familiar through their contact with business. This plan should be followed through the entire course. It will gain the attention of the students, arouse interest in the subject, and create a desire to learn more about bookkeeping and accounting.

It is very essential that great stress be placed upon accuracy and neatness in every detail; for without accuracy, bookkeeping is of no value, and neatness is an essential qualification for success in a business office.

The accounting side of the subject should be given careful consideration that the students may understand the methods of classifying and recording business transactions and accounts so the facts will be shown in their proper relations, and provide the information necessary for successful business administration.

In beginning the course, special attention should be given to see that the students understand each step. Each problem or exercise should be explained to the students by applying the knowledge of business transactions they already have, to the problems they are trying to solve. A part of the time each day should be devoted to recitation; but this would not signify that the entire class should be kept working at the same point. The more apt students may be permitted to work in advance, yet derive equal benefit from the recitations.

In order to complete the State text, Lyons' Bookkeeping, Parts I and II, it will be necessary to give the subject two 45-minute periods daily for the entire school year. The following outline of the text will serve as a guide for completing the work in one year. In the first six weeks, all the work in Part I should be completed up to page 74, which covers the preliminary work and the first month of the regular set; at the end of the second six weeks, the work should be completed to page 120, and the remainder of Part I should be completed at the end of the first half year.

Part II should be finished to page 176, including exercises and first month of regular work, at the end of the first six weeks of the second half year; at the end of the second six weeks to "September 17," page 196; and the remainder of the

text, including the supplementary problems, should be finished in the last six weeks. The supplementary problems will require at least four weeks for completion, and should be explained very thoroughly, that the students may understand this work.

If stenography and typewriting are given in connection with the course in bookkeeping, two periods of 45 minutes each, should be devoted to typewriting each day. Careful supervision should be given to the work to see that the students practice by the touch method. Two years will be required for the completion of stenography and typewriting.

Manual Training

SEVENTH GRADE

BENCHWORK IN WOOD-SHOP DRAWING

Aim: To teach the care and use of tools; to develop accuracy and skill; to teach the elements of industrial activities; to lay the foundation for the future selection of a life career, and to broaden the pupil's view of life's work.

Time: This outline is based on two double periods twice each week for the school year.

Drawing: Throughout the course an effort should be made to teach the principles of mechanical drawing as applied to shop drawings. The simple instruments for use in this grade should be mastered. No project should be undertaken until the pupil has first made a working drawing of the project.

1. Practice planing, sawing, laying out, gaging, marking, nailing, screwing, making duplicate parts. Butt joint used in nail box.

Tools: Saws—cross-cut, rip, back; bench knife, try square, jack plane, hammer, screw driver, nails, screws, block plane.

Suggested projects: Window stick, cutting board, coat and hat rack, key rack, nail box, loom for primary rug weaving, bench hook.

2. Planing to size, boring, gaging, squaring, laying off, more accurate sawing.

Tools: Brace and bits, steel square.

Suggested projects: Counting board, ring toss, game board, spool holder, laundry list, bird house.

3. Use of coping saw, compass, compass saw, sawing curve with coping saw, chiseling, paring with chisel, spoke shave.

Suggested projects: Sleeve board, elliptical bread board, sled, scouring board, wall bracket, round top stool, coat hanger, wagon.

4. Review all past processes and add lap joint, end lap, middle lap, half lap.

Suggested projects: Book rack, necktie rack, magazine rack, foot stool, wall shelf, table or desk shelf, milk stool.

5. Simple design as applied to the ornamentation of surface of woods. Use of compass saw, cabinet scraper and sandpaper.

Suggested projects: Tea pot block, thermometer back, calendar mounts, card holder, mail box.

6. Simple joinery in box construction, dowel joint and glue joint.

Tools: Continue the use of all tools learned and add the dowel plate and mallet. Use wood clamps and hand screws.

Suggested projects: Bread box, knife and fork box, coat and trousers hanger, bread board, or desk tray (made of different kinds of wood) doweled and glued.

7. Finishing—staining, sanding or rubbing down, shellac, wax.

Suggested projects: Finish all articles requiring a finished surface and make two or three panels to illustrate different methods of finishing.

NOTE—Finishing may be taken up as individual work whenever enough projects requiring finish are completed.

8. For the purpose of reviewing former operations and processes, make a taboret or pedestal. Require very accurate work and make applications of different joints and processes learned.

BOOKS FOR REFERENCE IN SEVENTH GRADE WORK

Elementary Woodworking—Foster.

Elementary Woodwork—Selden.

Essentials of Woodworking—Griffith (revised edition).

Correlated Courses in Woodwork and Mechanical Drawing—Griffith.

The A. B. C. of Woodworking—Wheeler.

Elements of Woodwork—King.

EIGHTH GRADE

CARPENTRY CONSTRUCTION AND CABINET WORK

FIRST SEMESTER

Elements of Carpentry

Aim: To lay a broader foundation by making a more specific study of the occupations of carpentry and cabinet making, thereby training the pupil in accuracy and to think in concrete terms.

Time: Outline based on two double periods each week. Continue the work in drawing. Use more accurate instruments and do accurate work. Teach the use of the scale in making plans for your buildings. Be able to read and interpret house plans and blue prints.

Tools: Saws, steel square, plumb bob, level, carpenters' pencil, chalk line, miter box.

Plan to complete at least one project by group work the first semester.

Suggested Projects: Miter box, saw horses, dog house, a small building with "lean-to" roof, chicken house, wood house, play shed or pavilion for the school grounds. Playground equipment for your school grounds. Some interested patron of the school may be found who will furnish the material and accept the finished building on the school grounds.

SECOND SEMESTER

Farm Mechanics

Review the steps of the projects of the seventh grade in sawing, planing, laying off, etc., and add projects that will involve the use of the following joints: Hopper joint, lapped dove-tail joint, ledge or rabbet joint, pinned mortise and tenon, thrust joint, stretcher joint.

Suggested Projects: Towel roller, floor broom holder, rabbit trap, push-mobile, trap nest, milk stool, camp stool, chicken coop, farm gate, wagon jack, fly trap, fireless brooder, feed trough, poultry feeder, poultry exhibit coop, poultry shipping coop, ladder, hurdles.

For individuals whose taste runs more toward cabinet work, the following projects are suggested: Book trough, wood-work for "Electric cluster," electric table or desk light, calendar mount or memo board, hall rack or mirror frame, picture frame, taboret, waste paper basket, pedestal, umbrella stand.

Finish: In this grade more care should be taken in the finishing of the articles, not because of greater value but

because of the greater ability of the boy. Improvement should be marked in each step of each process. Specifications for finish should be written and followed to the letter. Stain, filler, shellac, wax, varnish and flat finish should be used with sand paper, or pumice stone, rubbing between the coats. Too much care cannot be taken at any step of these different processes.

SUGGESTED BOOKS FOR THE ABOVE WORKS

Constructive Carpentry—King.

The A. B. C. of Woodworking—Wheeler.

Correlated Courses in Woodwork—Griffith.

Shop Projects Based on Community Problems—Burton.

Essentials of Woodworking—Griffith (revised edition).

Bench Work in Wood—Goss.

Woodwork—Ritchey.

Elementary Cabinet Work—Selden.

Catalogues and Trade Journals will be sent free by the different houses as advertising matter.

HIGH SCHOOL—FRESHMAN YEAR

BENCHWORK IN WOOD

In many of our high schools we have pupils who have not had the advantage of manual training in the grades. For the purpose of helping these pupils along it is necessary to do a great deal of individual work. By reviewing the tool processes of the grades and adding an interesting point here and there; by assigning reading and requiring written reports of different kinds on related subjects it is possible to obtain good results even though your class seems "mixed" at the beginning.

In the high school mechanical drawing, shop drawing, architectural drawing, design and freehand drawing should be given as distinctive a place on the program as any subject of the curriculum, but in many of the high schools of Oregon, as well as other states, this is impossible on account of existing conditions.

In all cases the work of making sketches and working drawings, reading blue prints and studying the relation of design to construction must be continued.

Time: Double period (90 minutes), five days each week.

Throughout the year definite and technical work on certain useful joints and their applications in practical and valuable articles should be taken up.

The care of the tools, grinding, whetting and stropping, is of first importance in this work. Good results cannot be obtained with poor, dull tools.

The following joints are suggested: Butt joint, glued and blocked joint, doweled butt joint, ledge or rabbet joint, through mortise and tenon joint, stub or blind mortise and tenon joint, pinned mortise and tenon joint, double mortise and tenon joint, slip or open mortise and tenon joint, dado joint, keyed mortise and tenon joint, doweled and glued joint.

The order in which these joints follow, or the sequence, must be left largely to the individual project in hand. Each of these joints might be applied in the construction of a single library table, but as each pupil will complete two at least and should complete three of the suggested projects, such a selection should be made that will involve the use of all the suggested joints.

Suggested Projects: Book trough, taboret, magazine stand, light stand, red cedar chest, sewing cabinet, Morris chair, wall cabinet, drop leaf table, Roman seat, library table, writing desk, dressing table.

In addition to the applications of the suggested joints, it is well to note that opportunity is offered in the above list for practice in putting on hinges, locks, drawer pulls and a wide range for study and application of design. The above list is full of opportunities for studies of related subjects; *i. e.*, history of design, tools, woods, industries, vocations, historical relations of modern construction, etc.

Finishing: More work along this line is spoiled by poor or incomplete finishing than careless tool work. Make a study of wood finishing. After making your specifications for your finish try it out on a piece of the same kind of wood of which your project is made. Study finishing from its many different phases.

BOOKS FOR REFERENCE PURPOSES

Correlated Courses in Woodwork and Mechanical Drawing—Griffith.
Essentials of Woodworking—Griffith (revised edition).
Elementary Cabinet Work—Selden.
Hand Work in Wood—Noyes.
Wood and Forest—Noyes.
Woodwork—Ritchey.
The A. B. C. of Woodworking—Wheeler.

HIGH SCHOOL—SOPHOMORE YEAR

CARPENTRY, ARCHITECTURAL DRAWING, HOUSE PAINTING

Without attempting to tell how each step should be taken, the following is suggested as a sequence of steps or processes as a guide to the study of house building:

1. Foundations and forms of construction. Framing.
2. Roof construction. Study of carpenter's square.

3. Boarding in. Roof coverings, outside finish.
4. Wiring, plumbing, plastering.
5. Heating, ventilation, sanitation.
6. Floor laying, inside finish.
7. Doors, window frames and sashes, stair building.
8. Paint and hardware.

A study of arithmetic applicable to house construction should be made a part of this course. Plans should be drawn to a given scale. Blue prints should be made from the selected plans. Specifications should be written, and estimates made, and bids submitted for the construction as shown by the specifications.

Visits should be made by the class and teacher to a house or houses in different stages of construction. If possible, visit a sawmill and learn something of the lumber industry.

Suggested Projects: A one-story building to be used for a manual training shop. A building for some patron of the school who will pay for the materials used. A model two-story house built to a scale (all steps of construction may be carried out in such a building). Sections of buildings may be made. (See Problems in Carpentry, Roehl.)

SUGGESTED BOOKS FOR REFERENCE

Problems in Carpentry—Roehl.
 Constructive Carpentry—King.
 Inside Finishing—King.
 The A. B. C. of Woodworking—Wheeler.
 The A. B. C. of the Steel Square—Hodgson.
 Industrial Arts Magazine.
 Manual Training Magazine.

The different phases of mechanical drawing should continue through the entire four years of high school.

The following textbooks are recommended:

Elementary Course in Mechanical Drawing—Chase.
 Elements of Mechanical Drawing—Anthony.
 Mechanical Drawing—Cross.
 Elements of Mechanical Drawing—Faunce.
 Structural Drawing—Edminster.
 Architectural Drawing—Edminster.
 Architectural Drafting—Greenberg and Howe.

TOOLS FOR MANUAL TRAINING SHOP

INDIVIDUAL TOOLS

A set of the following required for each bench (two sets for each double bench):

Bailey Iron Jack Plane, No. 5.
 Try Square, No. 20, 6-inch.
 Boxwood Rule, No. 34.

Bench Knife, No. 3.
 Buck Brothers' Chisel, No. 36, $\frac{3}{4}$ -inch.
 Buck Brothers' Chisel, No. 36, $\frac{1}{2}$ -inch.
 Buck Brothers' Chisel, No. 36, $\frac{1}{4}$ -inch.
 Bench Brush, No. 2.
 Bench Hook (should be made).
 Bishop Back Saw, No. 8, 10-inch.
 Stanley Marking Gage, No. 65.

GENERAL TOOLS

(Estimated on basis of 20 pupils.)

- 2 Bishop Hand Saws—Cross cut, No. 89, 8 point 22-inch.
- 2 Bishop Hand Saws—Cross cut, No. 89, 10 point, 24-inch.
- 2 Bishop Hand Saws—Rip, No. 89, 7 point, 24-inch.
- 6 Countersinks.
- 6 Stanley Block Planes, No. 65, 7-inch.
- 3 Braces—Plain, No. 12, 10-inch sweep.
- 1 Brace—Ratchet, No. 831, 12-inch sweep.
- 1 Set Irwin Auger Bits in box.
- 2 dozen Auger Bits, small sizes, assorted.
- 1 dozen Handscrews, No. 812.
- 1 dozen Clamps, iron, open 8 inches.
- 1 dozen sets Wood Bar Clamps, irons only.
- 2 Stanley T Bevels, No. 25, 8-inch.
- 2 Stanley 608 Jointers, 24-inch.
- 8 "Orlock" Hammers, assorted sizes.
- 2 Wing Dividers, No. 35.
- 12 Hardwood Mallets (should be made).
- 1 Ball-Bearing Grindstone.
- 3 Lily White Washita Oil Stones.
- 2 Oil Cans.
- 3 Screw Drivers, 4-6-8-inch.
- 2 Screw Drivers, Ratchet, 6-inch.
- 12 Screw Driver Bits for Brace, assorted sizes.
- 12 Nail Sets, assorted sizes.
- 12 Cabinet Scrapers.
- 3 Buck Brothers' Chisels, No. 36, 1-inch.
- 2 Buck Brothers' Chisels, No. 36, $1\frac{1}{4}$ -inch.
- 2 Buck Brothers' Chisels, No. 36, $1\frac{1}{2}$ -inch.
- 1 Yankee Automatic Drill, No. 44.
- 1 Set Bit Stock Drills, for metal or wood.
- 1 Glue Heater.
- 1 Draw Knife.
- 1 Bench or Broad Hatchet, No. 124.
- 3 Steel or Carpenter's Squares.

NOTE.—By way of economy in money as well as floor space, double benches, two pupils at each bench, are recommended. Each bench should be equipped with two side vises, two tail vises, and the necessary dogs and bench stops.

Domestic Science

FIRST YEAR—FIRST SEMESTER

THREE DOUBLE PERIODS PER WEEK	ONE SINGLE PERIOD FOR RECITATION ONE SINGLE PERIOD FOR SUPERVISED STUDY	ONE DOUBLE PERIOD PER WEEK
<p><i>Food Laboratory—</i></p> <ol style="list-style-type: none"> General laboratory instructions. Prepare orangeade. Clean laboratory equipment. Prepare grape nectar. Prepare tea, coffee and serve with nabisco. Study fuels. 	<p><i>Food Recitation—</i></p> <ol style="list-style-type: none"> Cleanliness and water. Neatness of person. Cleanliness of utensils. Cleanliness in cooking processes. Use of water in the body. 	<p><i>Household Management—</i></p> <ol style="list-style-type: none"> Cleaning kitchen utensils. (a) Enamel. (b) Aluminum. Care of Refrigerator.
<ol style="list-style-type: none"> Cooking fruits in various ways, as stewing and baking. Canning of fruits and vegetables. Canning of fruits and vegetables. 	<ol style="list-style-type: none"> Preservation of foods. Causes of fermentation, mould, decay. Selection of food for preservation. Methods of preservation. (a) Canning. 	<ol style="list-style-type: none"> Cleaning of glass and metal.
<ol style="list-style-type: none"> Canning of fruits and vegetables. Canning of fruits and vegetables. Jelly making. 	<ol style="list-style-type: none"> Methods of preservation, continued. (b) Preserving. (c) Jellies. (d) Pickling. (e) Cold storage. (f) Drying. Pure food laws, especially those of Oregon. 	<ol style="list-style-type: none"> Cleaning of woodwork.

10. Jelly making. 11. Jelly making. 12. Preservation; using spices and sterilization as in making pear butter, etc.	4. Use of fruits in the diet.— Composition—classify fruits according to (a) season, (b) composition. Value as food. Use of various grades of fresh fruit.	4. Make and use furniture polish. Make a dust garden.
13. Preservation; using spices and sterilization as in making pear butter, etc. 14. Preservation by use of acids and spices. 15. Marmalades.	5. Carbohydrates— Classification. Source. Principles of cookery. Digestion and use in body.	5. Sweeping and dusting. Make dustless duster.
16. Prepare peanut brittle. Chocolate fudge. 17. Prepare fondant. 18. Mold fondant.	6. Sugar— Source, composition, manufacturing. Digestion and value as food. Danger of excess.	6. Study of vacuum cleaners and carpet sweepers.
19. White sauces. Prepare creamed toast. 20. Creamed onions. Creamed carrots. 21. Cream soups— (a) Celery. (b) Corn. Prepare sippets.	7. Starch— Structure and composition. Properties. Methods of cooking. Digestion.	7. Make list of cleaning materials, giving advantage of each.
22. Cream soups— (a) Tomato. (b) Pea. Prepare Imperial sticks. 23. Corn starch mold. Apple tapioca. 24. Rice and apple compote.	8. Cereals— Varieties. Methods of cookery. Principles of fireless cooker.	8. Removing of stains—ink, fruit, grass, etc., from: (a) Cotton. (b) Linen.

FIRST YEAR—FIRST SEMESTER—Continued

THREE DOUBLE PERIODS PER WEEK	ONE SINGLE PERIOD FOR RECITATION ONE SINGLE PERIOD FOR SUPERVISED STUDY	ONE DOUBLE PERIOD PER WEEK
25. Compare economy of prepared and unprepared breakfast foods. Fireless cooker.	9. Vegetables— Classification according to composition, methods of cookery, and value in the diet.	9. Removal of stains from: (a) Wool. (b) Silk.
26. Prepare cream of wheat with dates and rolled oats.		
27. Prepare macaroni with tomato sauce. Boiled rice.		
28. Various methods of vegetable cookery. Prepare creamed potatoes; baked potatoes.	10. Beverages— Classification according to food value.	10. Waters — treatment of hard and soft.
29. Scalloped cabbage. Steamed squash (summer). Stuffed onions.		
30. Prepare cocoa and thin bread and butter sandwiches.		
31. Mock table service.		
32. Prepare simple luncheon, consisting of cream soup, bread and butter sandwiches, and simple fruit dessert.	11. Fat— Composition and food value. Comparison of animal and vegetable fats. Adulterations. Economy of use.	11. Make javelle water and cleansing mixtures.
33. French dressing. Lettuce salad. Potato ball salad.		
34. Mayonnaise dressing.		
35. Combination vegetable salad. Fat as a conductor of heat.	12. Fat— Make list showing quantity purchased for one dollar of the following: Butter, crisco, lard, olive and cottonseed oil.	12. Make soap. Commercial preparation. Compare economy of commercial and home-made soaps.
36. French fried potatoes. Saratoga chips.		
37. Prepare pie from plain paste. Hot water paste.		

37. Make butter. Compare homemade and bought. Test for butter substitutes. Compare costs.	13. Protein— Classification. Source. Principles of cookery. Digestion and use in the body.	13. Starch and blueing; comparison of varieties.
38. Prepare cottage cheese. Make pineapple and cottage cheese salad.		
39. Prepare chocolate junket. Prepare junket whey.	14. Milk— Composition. Value as a food. Effect of heat, acids, rennet and bacteria.	14. Laundering of cotton.
40. Egg experiments showing effect of high and low temperature. Solubility. Plain omelet. Souffle with white sauce.		
41. Cheese tomato souffle. Cheese pudding. Soft steamed custard. Floating Island. Corn pudding. Tapioca pudding.	15. Butter and cheese— Composition. Manufacturing. Kinds. Value as a food.	15. Laundering of linen.
42. Rice and cheese. Stuffed baked potatoes, with cheese. Cheese nut roast. Caramel custard. Plan dinner from dishes prepared.	16. Eggs— Composition. Value as a food. Effect of heat.	16. Laundering of wool and silk.
43-54. Practical examinations and house cleanings. NOTE.—These six lessons are to be distributed throughout the course, at the discretion of the teacher.	17. Eggs— Methods of cookery. Preservation. Economy and use.	17. Ironing.
	18. Review.	18. Storage of clothing.

FIRST YEAR—SECOND SEMESTER

THREE DOUBLE PERIODS PER WEEK	ONE SINGLE PERIOD FOR RECITATION ONE SINGLE PERIOD FOR SUPERVISED STUDY	ONE DOUBLE PERIOD PER WEEK
<p><i>Food Laboratory—</i></p> <ol style="list-style-type: none"> 1. Meat—experiments; structure; effect of salt, etc. 2. Pan-broiled steaks; Hamburg. 3. Demonstration pot roast; meat loaf. 4. Meat croquettes; meat souffle. 5. Pork chops and blushing apples. 6. Ham and bacon. 7. Mutton and brown gravy. 8. Chicken (demonstration of dressing). 9. Chicken pie. Chicken soup from bones. 10. Demonstration of boiling meat. Make soup stock. 11. Oven roast. 12. Casserole of rice and meat. 	<p><i>Food Recitation—</i></p> <ol style="list-style-type: none"> 1. Structure and study of meat; composition; principles of cookery. 2. Meat— Kinds. Use as food. 3. Meat— Selection. Freshness. Location. Cost. 4. Poultry— Selection. Age. Cost. Freshness. Cold storage. 	<p><i>Household Management—</i></p> <ol style="list-style-type: none"> 1. Location of the house. Locality. Exposure to wind and sunlight. 2. Study of soil and drainage. NOTE.—House planning and construction should be parallel in the Domestic Art Department. 3. House planning. Planning and equipping a simple modern kitchen. (Remainder of house planned under Domestic Art Department.) 4. House planning. Planning and equipping a simple modern kitchen. (Remainder of house planned under Domestic Art Department.)

13. Demonstration of baked fish.	5. Fish— Selection. Cost. Season.	5. House planning. Planning and equipping a simple modern kitchen. (Remainder of house planned under Domes- tic Art Department.)
14. Fish croquettes; fish balls.		
15. Fillets of halibut; deep fat.		
16. Steamed fish with egg, parsley white sauce.	6. Fish as food— Use in diet.	6. House planning. Planning and equipping a simple modern kitchen. (Remainder of house planned under Domes- tic Art Department.)
17. Baked fillet of fish, Hollandaise sauce.		
18. Pan-broiled fish.		
19. Fried oysters and oyster soup.	7. Gelatine— Source. Manufacture. Use.	7. Ventilation— Principles. Methods.
20. Snow pudding, boiled custard sauce.		
21. Tomato jelly salad, boiled salad dressing.		
22. Orange Charlotte.	8. Legumes and nuts— Prepare List. Uses in diet. Legumes <i>vs.</i> meat. Legumes <i>vs.</i> nuts.	8. Ventilation— Effects of inadequate ventilation. Comfort. Health.
23. Meat jelly.		
24. Baked beans; bean soup.		
25. Butter beans; creamed canned peas.	9. Flours.	9. Heating— Types: Stoves. Open fireplaces.
26. Salted almonds and peanuts.		
27. Flour experiments—for gluten and starch. Experiments with chemical leavening agents.		
28. Popovers.	10. Leavening agents— List of leavening agents. Classify commercial agents. Composition and adulterations.	10. Furnaces.
29. Sponge cake.		
30. Brown bread.		

FIRST YEAR—SECOND SEMESTER—Continued

THREE DOUBLE PERIODS PER WEEK	ONE SINGLE PERIOD FOR RECITATION ONE SINGLE PERIOD FOR SUPERVISED STUDY	ONE DOUBLE PERIOD PER WEEK
31. Ginger bread. 32. Baking powder nut loaf. 33. Cornmeal gems and muffins.	11. Doughs and batters— Classify.	11. Fuel. Classification. Source. Economical use.
34. Muffins—whole wheat and bran. 35. Baking powder biscuits. 36. Liquid yeast; yeast experiments.	12. Yeast— Varieties. Methods of reproduction. Factors essential to growth.	12. Lighting— Kinds: Natural. Mechanical. Cost. Efficiency.
37. Parkerhouse rolls. 38. Loaf of bread—white flour. 39. Loaf of bread—whole wheat flour.	13. Theory of bread— Classification — yeast breads; quick breads. Principles of bread making. Methods of mixing.	13. Water supply— Sources. Care of water supply.
40. Loaf of bread—rye, nut, raisin. 41. Cinnamon rolls. 42. Finger rolls.	14. Theory of bread— Qualities of good bread. Making a score card.	14. Practical plumbing— Principles of plumbing. Practical repairing.
43. Zwieback. 44. One egg cake. 45. Whole egg cake.	15. Theory of cakes— Classification. Methods of mixing. Cost. Value as food.	15. Disposal of Waste— Household garbage. Sewage.

46. White cake.	16. Desserts— Classification. Selection according to use. Principles of freezing.	16. Pure milk and food supplies— (a) What they are. (b) How to secure them. (c) How to care for them.
47. Cooky lesson.		
48. Steamed chocolate pudding.		
49. Frozen desserts—sherberts.	17. Review.	17. Visit markets, bakeries, dairies.
50. Ice Cream. Prepare cookies.		
51. Parents' reception or tea.	18. Examination.	18. Examination.
52. Final examination and house cleaning.		

SECOND YEAR—FIRST SEMESTER

NOTE—These meals are to be planned without computing caloric value. They are to be planned from the standpoint of the homemaker having knowledge of food principles.

THREE DOUBLE PERIODS PER WEEK	ONE SINGLE PERIOD FOR RECITATION ONE SINGLE PERIOD FOR SUPERVISED STUDY	ONE DOUBLE PERIOD PER WEEK
<p><i>Food Laboratory—</i></p> <ol style="list-style-type: none"> 1. Review egg and milk cookery. 2. Review vegetables and cereals. 3. Review breads—yeast and quick breads. 4. Visit bakeries or mills if convenient. 5. Review meat cookery. 6. Visit meat market. 	<p><i>Food Recitation—</i></p> <ol style="list-style-type: none"> 1. Food combinations. Rules for combining various food principles. 2. Factors governing food requirements—age, size, occupation, climatic conditions. 3. Factors governing food requirements—age, size, occupation, climatic conditions. 4. Balanced diet. 5. List vegetables, fruits, meats, according to season, with original cost. 	<p><i>Household Management—</i></p> <ol style="list-style-type: none"> 1-2. Theory of diseases— List of diseases carried by air, water, insects. 3. Infection and disinfection. 4. Contagion. 5. Emergencies— Types of emergency remedies. List of emergencies.
<ol style="list-style-type: none"> 7-8. Measure out and weigh 100 calorie portion of common food materials. 9. Plan a breakfast, allowing 8 to 10 cents per individual—average family in small town. 10. Visit grocery. 11. Serve breakfast—allowance 8 to 10 cents per individual. 12. Plan luncheon 10 to 12 cents per individual. Pay guests. 13. Serve luncheon—allowance 10 to 12 cents per individual. 14. Plan dinner—allowance 12 to 15 cents per individual; complete the day's ration. Pay guests. 15. Serve dinner—12 to 15 cents per individual. 		

NOTE—Marketing to be done in each case by girls.

16. Review pastry.	6. List vegetables, fruits, meats, according to season, with original cost, continued.	6. Emergencies— Prepare and apply antiseptics, bandages.
17. Review sponge cakes.		
18. Review butter cakes.		
19-20. Plan day's ration—allowance 50 cents per individual—family of five.	7. Menus for meals of different seasons.	7. Emergencies— Prepare and apply splints and poultices.
21. Serve breakfast.		
22. Serve luncheon. Pay guests.	8. List suitable breakfast dishes.	8. Care of the sick— Patient and nurse.
23. Serve dinner. Pay guests.		
24. Review salads.		
25. Review hot desserts.	9. Suitable luncheon dishes.	9. Care of the sick room.
26. Review frozen desserts.		
27. Bread sales—hot rolls.		
28. Bread sales—loaf bread.	10. Suitable dinner dishes.	10. Influence of air.
29. Make fruit cake.		
30. Make mince meat.		
31. Plan Thanksgiving dinner—25 cents per individual. Pay guests.	11. Menus for special occasions.	11. Influence of water.
32. Make preparations for Thanksgiving dinner.		
33. Serve Thanksgiving dinner.		
34. Plan day's ration—allowance per individual, 25 cents—for family of five, in month of December.	12. Menus for meals of small cost.	12. Influence of sunlight.
35. Serve breakfast of menu planned.		
36. Serve dinner of menu planned.		

SECOND YEAR—FIRST SEMESTER—Continued

THREE DOUBLE PERIODS PER WEEK	ONE SINGLE PERIOD FOR RECITATION ONE SINGLE PERIOD FOR SUPERVISED STUDY	ONE DOUBLE PERIOD PER WEEK
37. Serve supper of menu planned. 38-39. Plan and prepare school box-lunch.	13. List of suitable dishes for school lunch.	13. Relation of exercise, fresh air, sleep and diet to personal health.
40-41. Candy making. 42. Candy sale (candy sale to precede Christmas vacation).	14. Use of candy in diet.	14. Relation of exercise, fresh air, sleep and diet to personal health.
43-44. Some form of altruistic work desirable at this season. 45. Plan luncheon for laboring man for definite sum.	15. Institutional care of poor.	15. Relation of exercise, fresh air, sleep and diet to personal health.
46. Prepare luncheon for laboring man as planned. 47-48. Plan and prepare luncheon for members of class.	16. Diet of hard-working men.	16. Relation of exercise, fresh air, sleep and diet to personal health.
49. In groups of two, plan and prepare lunch for two from materials furnished for practical examination.	17. Review.	17. State sanitary laws.
50-53. Cleaning laboratories—lessons to be distributed throughout the course.	18. Examination.	18. Examination.
54. Examination.		

SECOND YEAR—SECOND SEMESTER

THREE DOUBLE PERIODS PER WEEK	ONE SINGLE PERIOD FOR RECITATION ONE SINGLE PERIOD FOR SUPERVISED STUDY	ONE DOUBLE PERIOD PER WEEK
<p><i>Food Laboratory—</i></p> <ol style="list-style-type: none"> 1. Plan and prepare foods for child, 18 months to 4 years. 2. Plan and prepare foods for child, 18 months to 4 years. 3. Plan and prepare foods for child, 18 months to 4 years. 4. Plan and prepare foods for child, 18 months to 4 years. 5. Plan and prepare foods for child 18 months to 4 years. 6. Plan and prepare foods for child, 18 months to 4 years. 7. Day's ration for child 12 years of age. 8. Day's ration for child 12 years of age. 9. Day's ration for child 12 years of age. 10. Plan and prepare day's rations for man and woman in average health, 75 years of age. 11. Plan and prepare day's rations for man and woman in average health, 75 years of age. 12. Plan and prepare day's rations for man and woman in average health, 75 years of age. 	<p><i>Food Recitation—</i></p> <ol style="list-style-type: none"> 1. Study of diet for young children under four years of age. 2. Diet for children between 4 and 6 years. 3. Diet for children between 6 and 12 years. 4. Diet for aged. 	<p><i>Household Management—</i></p> <ol style="list-style-type: none"> 1. Relation of individuals to family as a whole. 2. Division of labor and responsibility. 3. Plan the home work of a school girl. 4. Study of division of income.

SECOND YEAR—SECOND SEMESTER—Continued

THREE DOUBLE PERIODS PER WEEK	ONE SINGLE PERIOD FOR RECITATION ONE SINGLE PERIOD FOR SUPERVISED STUDY	ONE DOUBLE PERIOD PER WEEK
13. Plan and prepare day's ration for tubercular patient in March.	5. Study of causes of common diseases and methods of feeding.	5. Study of division of income.
14. Plan and prepare day's ration for tubercular patient in March.	6. Study of causes of common diseases and methods of feeding.	6. Each girl plan expenditure of assumed income for one month.
15. Plan and prepare day's ration for tubercular patient in March.	7. Study of causes of common diseases and methods of feeding.	7. Each girl plan expenditure of assumed income for one month.
16. Plan and prepare day's ration for rheumatic patient in March.	8. Study of causes of common diseases and methods of feeding.	8. Buying—Storage. "Women who spend."—Richardson.
17. Plan and prepare day's ration for rheumatic patient in March.	9. Diet for obesity.	9. Buying—Storage. "Women who spend."—Richardson.
18. Plan and prepare day's ration for rheumatic patient in March.		
19. Plan day's ration and prepare meal for diabetic patient in March.		
20. Plan day's ration and prepare meal for diabetic patient in March.		
21. Plan day's ration and prepare meal for diabetic patient in March.		
22. Prepare dishes for convalescent.		
23. Prepare dishes for convalescent.		
24. Prepare dishes for convalescent.		
25. Plan a day's ration for person suffering from obesity.		
26. Plan a day's ration for person suffering from obesity.		
27. Plan a day's ration for person suffering from obesity.		

28. Plan day's ration for woman 30 years of age, underweight.	10. Diet for underweight.	10. Reports on market prices. "Cost of living"—Richards.
29. Prepare breakfast, planned.		
30. Prepare dinner, planned.		
31. Cookery sale.	11. Review.	11. Importance of planning—Meals. General housework.
32. Plan day's ration for 20 cents.		
33. Prepare dinner of day's ration at 20 cents.	12. Test.	12. Keeping accounts—Keep personal and family accounts.
34. Sandwich making.		
35. Plan for reception.	13. Camp menus.	13. System in work—Study length of time required in making a bed—five successive days.
36. Reception to townspeople.		
<i>Camp Cookery—</i>		
37. Camp breads.		
38. Camp breads.		
39. Camp vegetables—prepared in class.	14. Packing picnic lunches.	14. Effect of carelessness, bad management and extravagance upon family and community.
40. Camp vegetables—prepared in class.		
41. Camp meats (mulligans and stews).		
42. Camp desserts—prepared in class.	15. Review.	15. Relation of homemaker to community.
43. Preparation of camp supper out in open.		
44. Picnic salads.		
45. Prepare picnic lunch, paid for by girls.	16. Examination.	16. Relation of homemaker to happiness of home.
46. Prepare class picnic lunch, expense paid by class.		
47. Practical examination to consist of meal for invalid, disease specified, materials furnished.		
48. House cleaning.		17. Examination.

Domestic Art

SEWING—FIRST YEAR—FIRST SEMESTER

Time: Three double periods per week—laboratory periods—sewing. One single period per week—recitation; and one single period for supervised study—textile work. Two single periods per week—art work bearing directly on Domestic Art work.

SEWING LABORATORY

PROBLEMS:

1. *Dish Towel*—

Processes: Basting; over-hand ends; hemming. Review of work done in grades.

Thought Emphasized: Kinds of towels; kinds of materials; cost of material; care of towels; storage of towels.

2. *Dress Bag*—

Processes: Basting; stitching seams; flat fell; buttons and button holes.

Pattern cut free hand; pattern selected by teacher; unbleached muslin—fine quality.

Thought emphasized: Care of clothing; care of machines; care of closets.

3. *Cotton Petticoat*—

Drafted or Commercial Pattern—Materials: Gingham; cambric; muslin.

Processes: Estimation of material; shrinking material; economical cutting; basting, fitting; stitching; making continuous placket facing; finish waistline—narrow belt; fastening; buttons and button holes; hooks and eyes; button-hole stitch used; fasteners to be rust proof.

Narrow Ruffle: $\frac{1}{2}$ -inch hem; 3 or 5 $\frac{1}{8}$ -inch tucks; ruffle applied to skirt with $\frac{1}{4}$ -inch tuck.

Thought Emphasized: Materials suitable for petticoats; kinds of petticoats a school girl should wear; modesty—over-elaborate underwear discouraged; how to fit a petticoat correctly; suitable plackets for petticoat; care of petticoats.

4. *Combination Suit* —

Pattern: Drafted or commercial.

Materials: Cambric; muslin; long cloth.

Processes: Interpretation of patterns; estimation of material; materials suitable; shrinking material; economical cutting; French fell seam in corset cover; flat fell seam in drawers—fell hemmed down by hand.

5. *Corset Cover*—

Hem feather-stitched in front of corset cover, also around top of arm's eye; simple design embroidered in white on front of corset cover; make button holes; sew on buttons.

6. *Drawers*—

Narrow hem—feather stitched—lace may be over-handed on; flat-stitched placket facing; joined to corset cover with narrow bias strip; buttons and button holes.

Thought Emphasized: Materials and trimming suitable for corset covers; appreciation of nice underwear and sense of refinement which its wearing tends to give; ready-made underwear *vs.* home-made; conditions under which much ready-made underwear is made; corsets and their proper adjustments; care of corsets; kinds of corsets young girls should wear; care of underwear; amount and cost of underwear for a school girl for a year.

TEXTILE RECITATION

Study of Cotton—

Importance; where grown; varieties; importance in United States; cotton culture; growing; shipping; cotton manufacture; finishing; common cotton; materials every girl should know; cotton by-products.

ART

Art work to be given to apply directly on Domestic Art problems.

Principles of design.

Study of: Line-significance of quality and arrangement; mass—composition, distribution of dark and light; color—study of qualities, hue, value, intensity.

Practical Application: Decorative bands for dress trimmings; dresser scarfs; table runners; tray cloths; bags; cushions; crocheted edgings, insertions, medallions.

SEWING—FIRST YEAR—SECOND SEMESTER

SEWING LABORATORY

PROBLEMS:

1. *Mending Underwear—*

Patch; darn; mend lace; mend embroidery. Articles brought from home; washing before mending emphasized.

2. *Night Gown—*

Pattern: Drafted or commercial.

Materials: Crepe; long cloth; nainsook.

Processes: Estimation of material; shrinking material; economical cutting; seams—French seamed neck and sleeves, faced $\frac{1}{2}$ -inch facing, 2-inch hem on bottom; simple trimming of lace or scallop embroidery.

Thought Emphasized: Proper way of dressing for sleeping; hygiene of bed clothing; care of bed-room.

3. *Embroidered Dresser Scarf—*

Materials: White pique; white linen; white Indian head.

Processes: Measuring dresser; estimating material; shrinking; evening ends; hemstitch hems in linen or Indian head; scallop pique; initial embroidered—outline and seed stitch.

Thought Emphasized: Kinds of materials suitable for dresser scarfs; simplicity and daintiness in bed-room furnishing; care of dresser scarf; reposeful surrounding in bed-room to aid in giving repose in life.

4. *Napkin Hemmed—*

To be furnished by Domestic Science Department for use in department, or by students when convenient.

Processes: Damask or napery hem; initial embroidered in satin-stitch.

Thought Emphasized: Materials used in table linen; how to buy; care; storage; marking; folding; different sizes in table linens; removal of spots.

5. *Napkin Case*—

Materials: Blue galatea; white pique; white Indian head; white linen tape; embroidery cotton.

Processes: Estimation of size needed; estimation of material; basting tape on as binding; joining bindings; sewing on tape with chain stitch; loop and button fastening.

Thought Emphasized: Care of napkins; proper storage; mending table linen.

6. *Cotton Dress*—

Materials: Gingham; percale; lawn; dimity.

Pattern: Commercial or drafted.

Processes: Proper design for simple cotton dress; intelligent interpretation of pattern; estimation of material; shrinkage of material; economical cutting; fitting; finishing seams; simple decoration.

Thought Emphasized: Necessity for simplicity in wash dresses; how to alter patterns for individual figures; materials and designs suitable for wash dresses, also trimmings.

TEXTILE RECITATION

Study of Linen—

History; where grown; varieties; flax culture; flax by-products; finishing of linen; uses of linen yarn; common linen; materials every girl should know; linen by-products; simple tests for determining cotton and linen.

SEWING—SECOND YEAR—FIRST SEMESTER

Time: Same as in First Year work.

SEWING LABORATORY

PROBLEMS:

1. *Wool Dress (School)—Wool Skirt*—

Draft or commercial pattern.

Processes: Taking measurements; cutting pattern; materials suitable for wool skirt; estimation of material; shrinking of material; economical cutting; basting; fitting; pressing; bind seams; placket facing; fastenings; hang skirt; finish at waist line; finish at bottom.

Thought Emphasized: Woolen materials suitable for school dress; styles suitable for school dress; renovating material to be made over; estimation of material; efficiency in work; necessity for careful pressing in making woolen garments; seam finishes suitable for woolen garments; necessity for shrinking woolen material; simple tests to detect adulterations in woolen materials; care of woollens; storage of woollens.

2. *Wool Waist*—

Pattern: Drafted or commercial.

Processes: Taking measures; shrinking material; economical cutting; basting seams; fitting; stitching seams; pressing; binding seams; front finishes: make sleeves; put in sleeves; finish neck; finish waist line; put on fastenings—may be joined to skirt.

Thought Emphasized: Same as for woolen skirt with these additions—How to fit a waist; importance in basting sleeves correctly; finish of sleeves; finish of arm's eye; finish of neck and waist line; design suitable for school dress; care of woolen clothes; appropriateness of accessories to our dress; appropriateness of dress to occasion.

3. *Fine Needlework*—

Collar or cuffs, or doily, or any small white article.

Processes: Any decorative stitches suitable for white work; double hemstitching, if possible.

Thought Emphasized: Appreciation of handwork in decoration; cultivation of good taste in decoration; simplicity of decoration desirable; design in harmony with use intended and material used; comparison of hand and machine embroidery; care of fine needlework; laundering fine needlework.

TEXTILE RECITATION

Study of Wool—

Importance; history; where grown; varieties; wool culture; marketing; manufacture; dyeing; finishing woolen fabrics; common woolen and worsted materials; care of woolen materials; storage; simple tests to determine adulterations.

ART

Study of Figure: Line; mass; color.

Costume Design: 1. Waists. 2. Skirts. 3. Dresses. 4. Millinery.

Study of House-Planning—relation to needs of occupants; convenience; beauty.

Principles of: Construction; decorating; furnishing.

SEWING—SECOND YEAR—SECOND SEMESTER

SEWING LABORATORY

1. *Millinery—Six Weeks*—

Problems: 1. Renovating hats. 2. Bow making; old ribbons or cotton cambric torn in narrow strips. 3. Freshening old flowers and trimmings. 4. Lining hats. 5. Covering hat frames. 6. Making ribbon flowers. 7. Trimming a hat.

Thought Emphasized: Economy and utilization of old materials; development of resourcefulness; study of line in relation to face and figure; good taste in hats; color best for different types; comparison with ready-trimmed hats; suitability of style to age; production of millinery materials—responsibility of women in production.

2. *Graduating Dress*—

Cost limited: \$4.00.

White Material: Lawn; dimity; organdy.

Processes: Same as for cotton dress of first year except that the design should be more original and there should be hand work in trimming.

Thought Emphasized: Good taste in dress; suitable materials; design carefully chosen; costume design a commendable vocation; comparison of home-made with ready-made dresses; study of sweat-shop labor; cultivation of right spirit in graduation dress; simple accessories to dress; care of white dresses.

List of Clothing for School Girl for a Year: 1. Articles. 2. Materials. 3. Price. 4. Where to reduce extravagances. 5. Chart showing articles with samples of materials and prices.

TEXTILE RECITATION

Study of Silk—

Importance; history; where grown; varieties; silk culture; manufacture; silk dyeing and finishing; weighting; common silk; materials; artificial silk fibers.

REFERENCE BOOKS FOR SCHOOL LIBRARY

Textiles—Woolman & McGowan.
Shelter and Clothing—Kinne & Cooley.
Household Textiles—Gibbs.
Oriental Rug Book—Ripley.
Story of the Cotton Plant—Wilkinson.
Embroidery Up-to-Date—Butterick Pub. Co.
Textiles—Dooley.
Lace—Lowe.
Home Life in Colonial Days—Earle.
Commercial Geography—Chisholm.
Cotton Spinning—Marsden.
Cotton Weaving—Marsden.
The Laundry—Rose.
Millinery—Reeves.
Art of Right Living—Richards.
The Woman Who Spends—Richards.
The Use of the Plant in Decorative Design—Lawrence & Sheldon.
House Furnishing—Hunter.
Country Homes—Hooper.

ADOPTED TEXTBOOKS FOR HIGH SCHOOLS

	Date of copy- right	Retail price
<i>Agriculture:</i>		
Elements of Agriculture, by Warren; The McMillan Co., publishers, New York.....	1909	\$1.10
(This book was adopted by the Commission with the stipulation that The Macmillan Company furnish, free to all schools using this book, a pamphlet giving a full treatise on dry farming and irrigation.)		
<i>Algebra:</i>		
New High School Algebra, by Wells and Hart; D. C. Heath & Co., publishers, Boston, Mass.....	1912	1.20
<i>Arithmetic:</i>		
Wells Academic Arithmetic, by Webster Wells; D. C. Heath & Co., publishers, Boston, Mass.....	1893	1.00
<i>Biology:</i>		
Essentials of Biology, by Hunter; American Book Co., publishers, New York.....	1911	1.13
<i>Bookkeeping:</i>		
Principles of Bookkeeping and Farm Accounts, by Bexell and Nichols; American Book Co., publishers, New York (adopted for the grades).....	1913	.59
Lyons' Bookkeeping, complete text, by J. A. Lyons; Lyons & Carnahan, publishers, Chicago, Ill.....	1910-1913	1.00
Lyons' Bookkeeping, Part I text, by J. A. Lyons; Lyons & Carnahan, publishers, Chicago, Ill.....	1909-1913	.80
Lyons' Bookkeeping, Part II text, by J. A. Lyons; Lyons & Carnahan, publishers, Chicago, Ill.....	1910-1913	.45
Lyons' Bookkeeping, Part I outfit, by J. A. Lyons; Lyons & Carnahan, publishers, Chicago, Ill.....	1913	1.20
Lyons' Bookkeeping, Part II outfit, by J. A. Lyons; Lyons & Carnahan, publishers, Chicago, Ill.....	1910	.80
<i>Botany:</i>		
Practical Botany, by Bergen and Caldwell; Ginn & Co., publishers, Boston, Mass.	1911	1.30
<i>Chemistry:</i>		
An Elementary Study of Chemistry, by McPherson and Henderson; Ginn & Co., publishers, Boston, Mass.....	1906	1.25
<i>Civil Government:</i>		
The American Republic, by S. E. Forman; The Century Co., publishers, New York.....	1911	1.10
<i>English:</i>		
English Composition, Book I, by Stratton D. Brooks; American Book Co., publishers, New York.....	1911	.68
English Composition, Book II, by Stratton D. Brooks; American Book Co., publishers, New York.....	1912	.90
Kimball's English Grammar, by Lillian G. Kimball; American Book Co., publishers, New York.....	1911	.45
English Literature, by William J. Long; Ginn & Co., publishers, Boston, Mass.....	1909	1.35
American Literature, by Abernethy; Charles E. Merrill Co., publishers, New York.....	1902	1.00

	Date of copy- right	Retail price
<i>Geometry:</i>		
Wentworth's Plane and Solid Geometry, by Wentworth and Smith; Ginn & Co., publishers, Boston, Mass.....	1911	\$1.30
<i>German:</i>		
Elementarbuch der deutschen Sprache, by Arnold Werner-Spanhoofd; D. C. Heath & Co., publishers, Boston, Mass.	1912	1.00
Ein Sommer in Deutschland, by Manley; Scott, Foresman & Co., publishers, Chicago, Ill.....	1912	.90
<i>History:</i>		
History of the Ancient World, by George W. Botsford; The Macmillan Co., publishers, New York.....	1911	1.50
Medieval and Modern History, revised, by Philip Van Ness Myers; Ginn & Co., publishers, Boston, Mass.....	1905	1.50
American History, by James and Sanford; Charles Scribner's Sons, publishers, New York.....	1909	1.40
<i>Latin:</i>		
Essentials of Latin, by Henry Carr Pearson; American Book Co., publishers, New York.....	1912	.81
Latin Grammar, by Charles E. Bennett; Allyn and Bacon, publishers, Boston, Mass.....	1908	.80
Caesar's Gallie War, by Gunnison and Harley; Silver, Burdett & Co., publishers, New York.....	1907	1.25
Cicero's Orations, by Gunnison and Harley; Silver, Burdett & Co., publishers, New York.....	1912	1.25
Virgil's Aeneid, by Fairclough and Brown; Benj. H. Sanborn & Co., publishers, Boston, Mass.....	1908	1.40
<i>Physical Geography:</i>		
Elements of Physical Geography, by Thomas Cramar Hopkins; Benj. H. Sanborn & Co., publishers, Boston, Mass.	1908	1.35
<i>Physics:</i>		
A First Course in Physics, by Millikan and Gale; Ginn & Co., publishers, Boston, Mass.....	1913	1.25
<i>Physiology:</i>		
Advanced Physiology and Hygiene, by Conn and Budington; Silver, Burdett & Co., publishers, New York.....	1909	1.10
<i>Classics:</i>		
The Textbook Commission adopted the classics in English and German of those publishing companies which will enter into contracts to supply them at the list prices.		

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